ARCHER

Version 6.9.2

CMMC Management Use Case Guide

Contact Information

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Distribution

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Contents

Chapter 1: CMMC Management Use Case

Cybersecurity Maturity Model Certification (CMMC), an initiative of the U.S. Department of Defense (DoD), aims to enforce and maintain contractor and subcontractor cybersecurity compliance across the federal defense industrial base by protecting controlled unclassified information (CUI). CUI includes any information that the U.S. government or another entity creates or possesses on its behalf, within the U.S. defense industrial vendor base. Any commercial organization doing business with the DoD needs to be certified by a third-party CMMC assessor to validate that they meet the appropriate CMMC specifications via five levels of CMMC certification. To meet the requirements for a specific level, a contractor must first meet the practices and processes of the levels that precede it.

The Archer CMMC Management helps organizations to meet the challenges of CMMC certification by enabling organizations to identify, document, and manage the appropriate CMMC practices and processes required for improved cybersecurity hygiene for storage and management of CUI data. Archer CMMC Management focuses on pre-assessment activities. It defines scoped boundaries, system components, policies, and procedures; allocates the appropriate assessment processes, assessment practices, and assessment objectives across the different components of the system; identifies deficiencies, remediates POA&Ms, and creates the appropriate system security plan (SSP) documentation.

Archer CMMC Management develops pre-CMMC assessment plan for certification assessments, helps with compliance mapping for new CMMC certification assessments, ensures proper alignment for assessments across all the subsystems, enables evidence documentation for assessment defensibility, identifies, documents, manages, and resolves deficiencies across security requirements. It also streamlines compliance reporting capabilities and provides real time status dashboarding. With Archer CMMC Management, you can maintain a view of current CMMC gaps, documentation, and action plans in a central risk and compliance solution, get real-time visibility of status and prioritization of any deficiency and its remediation progress, enjoy automate follow-up and remediation processes to speed resolution of identified CMMC deficiencies, maintain your certification environment, and resolve new security requirement deficiencies as they arise.

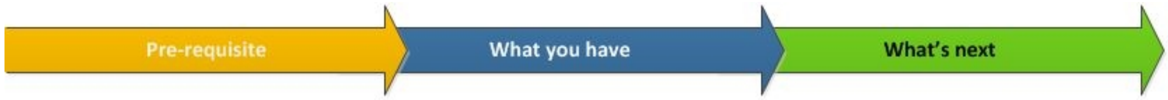
How CMMC Management Fits into a Risk and Compliance Program

The following section describes the prerequisite use cases required for CMMC Assessment and the key features and benefits of this solution.

Prerequisite and Next Use Cases

This following diagrams show how this use case fits into the overall CMMC solution area.

Scenario 1



Issues Management

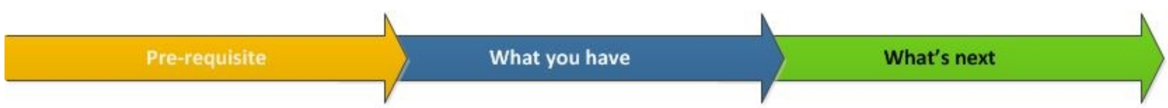
- Establish your business hierarchy
- Consolidate and coordinate findings and remediation plans from risk, compliance, audits, and other assessments
- Manage exceptions with appropriate risk sign-off acceptance

CMMC Management

- Establish system scope for preassessment
- Gather CMMC level specific requirements from the catalog
- Implement and assess them for certification

NA

Scenario 2



POA&M Management

- Consolidate issues management process
- Consolidate list of defects and findings from audits and A&A and CM processes
- Manage risk acceptance requests with informed review or approval
- Consolidate list of POA&Ms with status, progress, and expiration dates

CMMC Management

- Establish system scope for the certification audit
- Gather CMMC level specific requirements from the catalog
- Implement and assess them for certification

NA

- CMMC Data Sheet

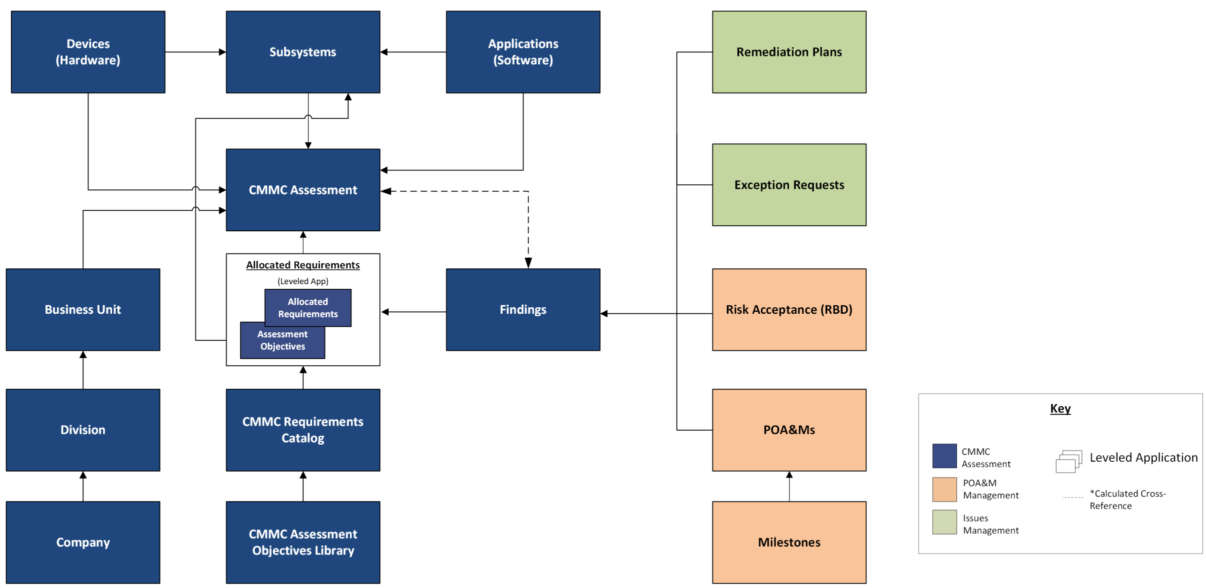
Get Started

- Read more about the use case architecture
- Learn how the use case works
- Install and set up the use case

Chapter 2: CMMC Management Use Case Components

Architecture Diagram

The following diagram shows the relationships between the applications in the CMMC Management use case.



Applications

The following table describes the use case applications.

Application/Questionnaire	Description
CMMC Assessment	Use the CMMC Assessment application to begin the assessment and provide details like: Name, Stakeholders, CMMC level, Assessment Type and other relevant information. This application enables the user to allocate and assess the requirements. Additionally, CMMC assessment application provides the capability to generate and download the Security Assessment Report (SAR) and System Security Plan (SSP) templates which will help the users to assess the risk and complete the Cybersecurity Maturity Model Certification.
CMMC Requirements Catalog	The CMMC Requirements Catalog application serves as a central repository of all the Requirements for the CMMC Assessment use case. Requirements from the Requirements Catalog application are mapped to assessment objectives in the CMMC Assessment Objectives Library application. Uniquely identified copies of the requirements will be allocated to each CMMC Assessment based on the CMMC level.
Subsystems	The Subsystems application provides the ability to create subsystems for a CMMC Assessment. With the Subsystems application, you can group IT assets into subsystems.

Application/Questionnaire	Description
CMMC Assessment Objectives Library	The CMMC Assessment Objectives Library application serves as a central repository of all the Assessment Objectives associated with the Controls/Requirements for the CMMC Assessment use case. Assessment objectives from this application are mapped to requirements in the CMMC Requirements Catalog application. Each assessment objective in the CMMC Requirements Catalog application is a master copy. Uniquely identified copies of the assessment objectives are allocated to each CMMC Assessment or Subsystem based on the “CMMC Level” and “Implemented By” field values.
Allocated Requirements	Use the Allocated Requirements application to create a unique copy of the requirements for each CMMC Assessment based on the CMMC level selected at the assessment level. This is achieved by an automated data feed that pulls copies of each requirement from the CMMC Requirements Catalog application. Allocated Requirements is a two-level application, and for each requirement the data feed pulls the corresponding assessment objectives from the CMMC Assessment Objectives Library application. Additionally, based on the ‘Implemented By’ field values (‘S’ and ‘O/S’), the data feed creates a copy of the Assessment objects at each subsystem level.
Devices	The Devices application serves as a central repository of knowledge about your business critical devices and their business criticality.

Application/Questionnaire	Description
Applications	The Applications application stores all software applications used by the organization to perform business operations. You can view how an application is used, the people that use it, and the devices on which the application is installed. You can also track the business impact, customer impact, and licensing details, and associate it with other aspects of the enterprise infrastructure. **Note:** The Applications application is included in the Enterprise Catalog package.
Business Unit	The Business Unit application provides a detailed view of all activities related to the specific business unit. **Note:** The Business Unit application is included in the Enterprise Catalog package.
Division	The Division application represents the intermediate unit within the business hierarchy which is a layer below the high-level company and a layer above the individual business unit. You can use this application to further document the relationships within your business and measure the effectiveness and compliance of individual divisions within the enterprise. **Note:** The Division application is included in the Enterprise Catalog package.
Company	The Company application stores general, financial, and compliance information at the company level. Combined with the Division and Business Unit applications, this application supports roll-up reporting of governance, risk, and compliance initiatives across the enterprise. **Note:** The Company application is included in the Enterprise Catalog package.

Application/Questionnaire	Description
Findings	The Findings application allows you to document issues, deficiencies, or gaps found through assessments and control testing. Findings are either auto-generated from questionnaires, including links back to the questionnaire, target, and any applicable control standards and authoritative sources, or are manually generated by users. Findings can be resolved through remediation tasks or exception requests. Through the Findings application, you can: • Review findings that are auto-generated through the results of assessments and control testing. • Use automated workflow to route findings to the appropriate personnel. • Mitigate findings through remediation tasks or exception requests. The system calculates residual risk and compliance status based on the resolution of findings. • Relate multiple findings in the context of a remediation plan. • Track tasks associated with findings resolution.

Access Roles

The following table describes the use case access roles.

Access Role	Description
CMMC: Administrator	This role provides create, read, and update rights to all the applications in this use case.
CMMC: Owner	This role is responsible for implementing the requirements (practices / processes), keeping the system secure and writing the System Security Plan (SSP).
CMMC: Assessor	This role performs the requirements assessments, documents the findings, and writes recommendations and the Security Assessment Report (SAR).

> **Note:** For detailed, page-level access rights, and a complete list of application record permission fields, see the *Data Dictionary*.

> **Note:** If the same user needs to enact as an Owner and Assessor, please add the CMMC:Admin role.

Dashboards

The following table describes the use case dashboards.

Dashboard	Description
CMMC Overview with POA&M Management	This dashboard provides a high-level overview of the CMMC use case. This default dashboard is used to view POA&M status by CMMC Assessment, In-Progress CMMC Assessments, number of not-met requirements and requirement statuses based on the CMMC Assessment that are required for doing a CMMC Certification Assessment. Users can also create a new CMMC Assessment or view CMMC Assessments from the links available under the CMMC Quick links.
CMMC Overview with Issues Management	This dashboard is used for an existing client who already has the Issues Management and will be able to view the Remediation Plans associated with the CMMC Assessments. Additionally, they can view In-Progress CMMC Assessments, number of not-met requirements and requirement statuses based on the CMMC Assessment that are required for doing a CMMC Certification Assessment. Users can also create a new CMMC Assessment or view CMMC Assessments from the links available under the CMMC Quick links.
CMMC C3PAO Assessor Overview	This dashboard is used by C3PAOs to view In-Progress CMMC Assessments, number of not-met requirements and requirement statuses based on the CMMC Assessment that are required for doing a CMMC Certification Assessment. Users can also create a new CMMC Assessment or view CMMC Assessments from the links available under the CMMC Quick links.

Data Feeds

The following table describes the use case data feeds.

Data Feed	Description
CMMC: Allocate Requirements	This data feed selects the appropriate requirements from the “CMMC Requirements Catalog” application based on the selected ‘CMMC Level’ in the CMMC Assessment records, and creates copies of those requirements at the Allocated Requirements application. Additionally, for all the applicable requirements based on the ‘Implemented By’ field values (‘S’ and ‘O/S’), the data feed creates a copy of the assessment objectives at each subsystem level.

Data Dictionary

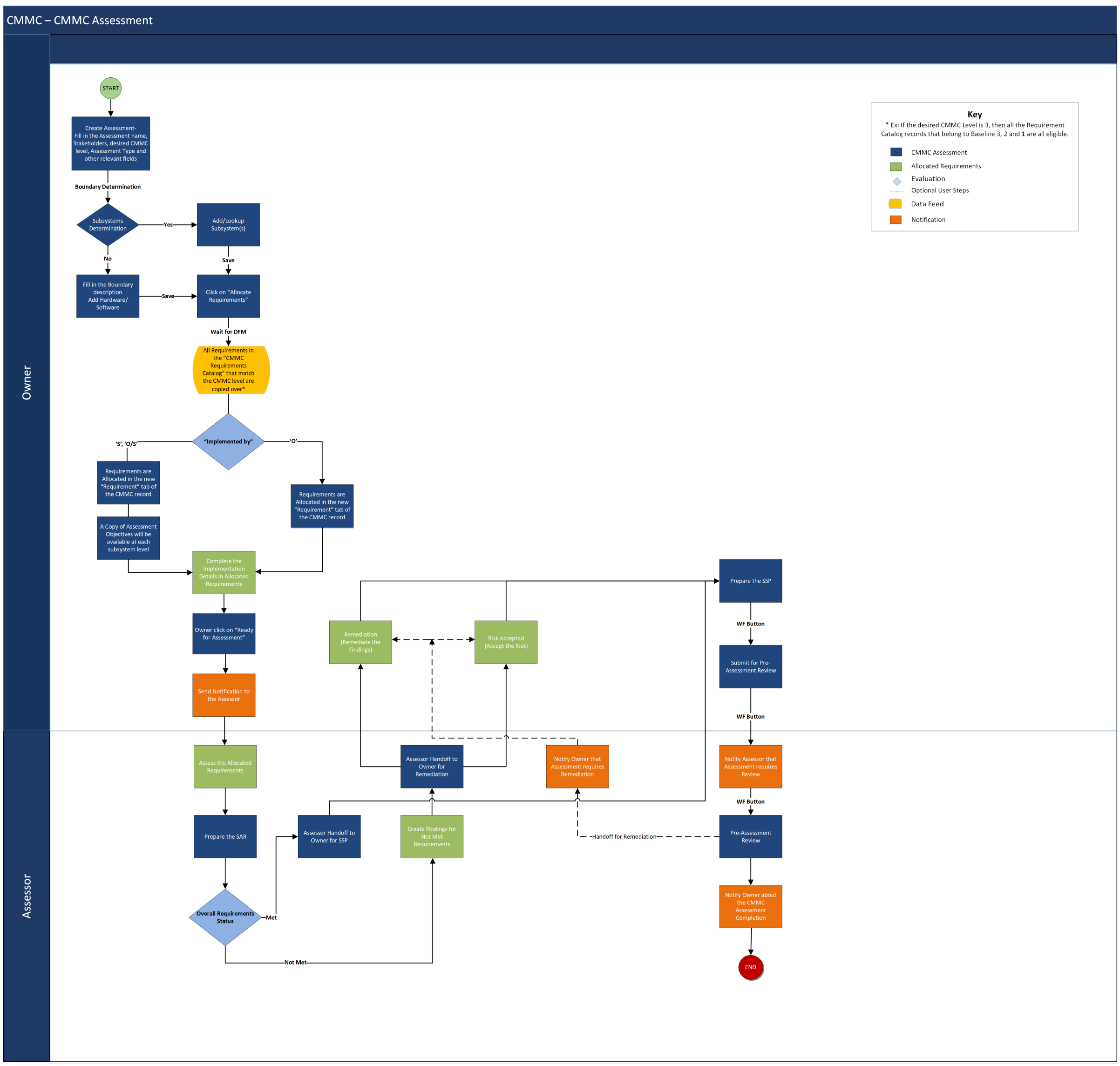
For a detailed and complete list of CMMC Management page-level access rights, see the *Data Dictionary*.

You can obtain the *Data Dictionary* for the use case by contacting your Archer Account Representative.

Chapter 3: Using Archer CMMC Management

The Archer CMMC Management use case is built to enable the following processes.

Creating the CMMC Assessment (Assessment Type = Pre-Assessment)



The Archer CMMC Management use case allows the Owner to create a CMMC Assessment with basic details like the Assessment name, Stakeholders, desired CMMC level, Assessment Type and other relevant fields. Based on the option selected for 'Subsystem Determination', the Owner can either add the Subsystems or add the Hardware and Software separately.

The Owner saves the changes and clicks 'Generate Requirements' to allocate the requirements.

Once the requirements are allocated, the Owner provides the ‘Implementation Details’ for each requirement and clicks ‘Ready for Assessment’ in the CMMC Assessment.

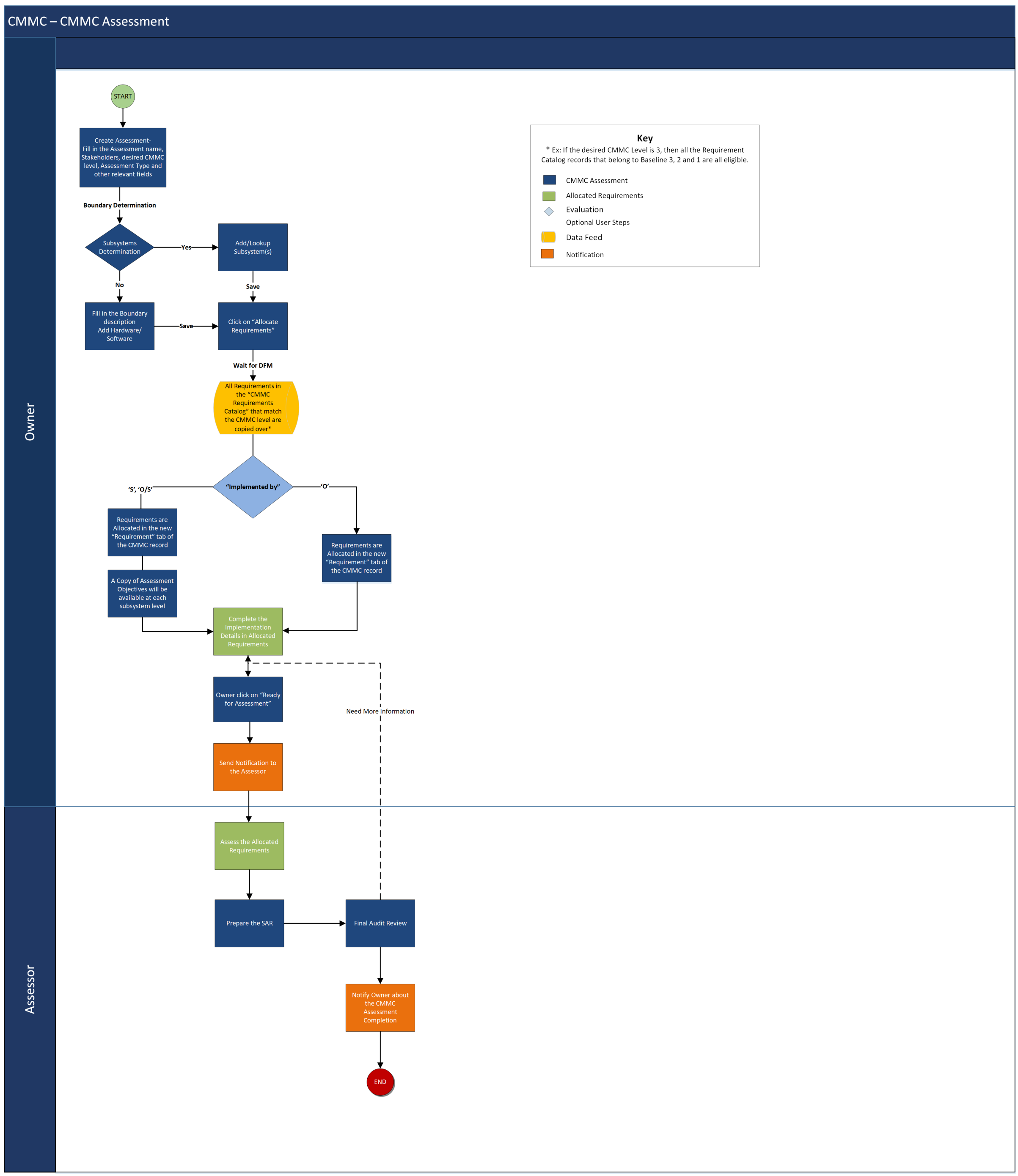
The Assessor is notified about the task and logs into the system and assesses each requirement. Based on the assessment objectives at the ‘subsystem’ level and at the ‘allocated requirement’ level, the Assessor decides the overall status of the allocated requirements as ‘NA’, ‘Met’ or ‘Not Met’.

For all the requirements that are ‘Not Met’, the Assessor creates findings, generates the SAR template, attaches SAR to the CMMC Assessment record and clicks ‘Handoff for Remediation’.

The Owner is notified about the task and logs into the system. The Owner remediates all the open findings, generates the SSP template, attaches it to the CMMC Assessment record and clicks ‘Ready for Assessment’.

The Assessor is notified about the final approval and logs into the system, verifies all the details, and completes the Assessment.

Creating the CMMC Assessment (Assessment Type = Final Audit)



The Archer CMMC Management use case allows the Owner to create a CMMC Assessment with basic details like the Assessment name, Stakeholders, desired CMMC level, Assessment Type and other relevant fields. Based on the option selected for 'Subsystem Determination', the Owner can either add the Subsystems or add the Hardware and Software separately.

The Owner saves the changes and clicks 'Generate Requirements' to allocate the requirements.

Once the requirements are allocated, the Owner provides the ‘Implementation Details’ for each requirement and clicks ‘Submit to Assessor’.

The Assessor is notified about the task and logs into the system and assesses each requirement. Based on the Assessment objectives at the ‘subsystem’ level and at the ‘allocated requirement’ level, the Assessor decides the overall status of the allocated requirements as ‘NA’, ‘Met’ or ‘Not Met’.

For all the requirements that are ‘Not Met’, the Assessor provides comments, generates the SAR template, attaches SAR to the record and completes the Assessment. Optionally, the Assessors or Auditors can add findings to the 'Not Met' requirements.

Chapter 4: Defining the CMMC Management Boundary

Defining a clear system boundary is a critical step when creating a CMMC Assessment. By explicitly defining which hardware and software is in your assessment boundary, you can see how the system fits into the entire organization, what impact any risk would have on the mission, and define the scope for control assessments.

You define the boundary with a combination of network and boundary drawings, hardware and software inventories, and a narrative description of the boundary. You must define the boundary before categorizing the system or allocating controls.

Chapter 5: Allocating and Tailoring Requirements

In the Archer CMMC Management use case, allocated requirements must have one of two allocation statuses:

- Allocated. The requirement is applicable to the system and must be documented and tested.
- Not applicable. The requirement is not required to be documented or tested.

As part of allocating requirements to the CMMC Assessment, CMMC Level defines the number of requirements to be assessed. You can tailor the requirements in three ways:

- Manually add requirements that should be included in the CMMC Assessment.
- Manually remove requirements that should not be included in the CMMC Assessment.
- Select Allocate Requirements to trigger a data feed to add the relevant requirements in bulk.

Chapter 6: Completing Allocated Requirements

Once a CMMC Assessment has the appropriate set of allocated requirements, the CMMC Owner provide Implementation details and redirect to CMMC Assessor to perform Assessments.

The assessment plan for a single assessment has three core elements:

- A list of requirements to be assessed
- One or more assessment objectives for each requirement
- One or more assessment methods for each objective

Here are the tasks to complete allocated requirements:

1. Complete Implementation details
2. Complete Assessment details

Chapter 7: Responding to Requirement Assessments

After the assessment is completed, the assessor may find issues that must be addressed before the system can be certified. Findings for failed requirements must be accepted, reassessed or fixed for the completion of CMMC Assessment.

If you cannot immediately remediate a requirement, public sector users create a Plan of Action and Milestones to document, assign, and track the remediation process. Or else, please utilize remediation plans.

If Exception is needed for the findings, public sector users create a Risk Acceptance (RBD) to manage granting, denying, and expiring exceptions, else please create Exception Requests.

After security requirements are allocated, implemented, and assessed, the CMMC assessor or Owner can use the provided SSP or SAR mail merge template to produce a summary report.

Chapter 8: Installing CMMC Management Use Case

Installation Overview

Complete the tasks in the following table to install the CMMC Management use case.

Task	Steps
1. Prepare for the installation.	1. Ensure that your Archer system meets the following requirements: • Archer Platform version 6.9.2 or later. • You have a valid license for CMMC Management. • User account on Archer Community to download the use case files. 2. Download the use case file(s) from Archer Community. 3. Obtain the *Data Dictionary* for the use case by contacting your RSA Account Representative. The *Data Dictionary* contains the configuration information for the use case. 4. Read and understand the "Packaging" section of the Online Documentation.
2. Update the license key.	You must update the license key if you are installing a new application, questionnaire, workspace, or dashboard. The administrator (a web or database administrator) on the server on which the Archer Control Panel resides must update the license key in the Archer Control Panel before the application package is imported in order for the new items to be available for use. 1. Open the Archer Control Panel. 2. From the Instance Management list, click to expand the Instances list. 3. Right-click the instance that you want to update, and click Update License Key. 4. Update the applicable information: Serial Number, Contact Info, and Activation Method. 5. Click Activate.
3. Install the package.	Installing a package requires that you import the package file, map the objects in the package to objects in the target instance, and then install the package. See Installing the CMMC Management Use Case Package.
4. Set up Data Feeds.	You must import and schedule CMMC data feed that you want to use. See Setting Up CMMC Assessment Data Feeds.

Task	Steps
5. Set up Data Imports.	You must import CMMC data files that you want to use. See Setting Up CMMC Assessment Data Imports.
6. Perform post-installation cleanup.	The package installation does not update some attributes of objects, or delete obsolete objects that are not included in the current solution. Compare the objects in your database with the information in the *Data Dictionary* to determine which objects are obsolete or have been updated. See, Performing Use Case Cleanup Post-Installation.
7. Test the installation.	Test the CMMC Management use case according to your company standards and procedures, to ensure that the use case works with your existing processes.

Installing the CMMC Assessment Package

To install the CMMC Management use case, you must install the pre-requisites i.e. Issues Management use case package or the Plan of Action & Milestones Management use case package.

This section includes the tasks to install the packages. You must complete the tasks for each package in the following order:

1. Install the pre-requisite use case package in the instance.
2. Install the CMMC Management use case package.
3. Re-Install the pre-requisite use case package to resolve dependencies.

Task 1: Back Up Your Database

There is no Undo function for a package installation. Packaging is a powerful feature that can make significant changes to an instance. Back up the instance database before installing a package. This process enables a full restoration if necessary.

An alternate method for undoing a package installation is to create a package of the affected objects in the target instance before installing the new package. This package provides a snapshot of the instance before the new package is installed, which can be used to help undo the changes made by the package installation. New objects created by the package installation must be manually deleted.

Task 2: Import the Package

1. From the menu bar, click > Application Builder > Install Packages.
2. In the Available Packages section, click Import.
3. Click Add New, then locate and select the package file that you want to import.
4. Click OK.
   The package file is displayed in the Available Packages section and is ready for installation.

Task 3: Map Objects in the Package

1. From the menu bar, click > Application Builder > Install Packages.
2. In the Available Packages section, locate the package you want to map.
3. In the Actions column, click for that package.
   The analyzer examines the information in the package. The analyzer automatically matches the system IDs of the objects in the package with the objects in the target instance and identifies objects from the package that are successfully mapped to objects in the target instance, objects that are new or exist but are not mapped, and objects that do not exist (the object is in the target but not in the source).

   When the analyzer is complete, the Advanced Package Mapping page lists the objects in the package file and corresponding objects in the target instance. The objects are divided into the following categories:

   - Access Roles
   - Applications
   - Dashboard
   - Data Feeds
   - Folders
   - Global Values Lists
   - Groups
   - iViews
   - Languages
   - Letterheads

- Questionnaires
- Solutions
- Sub-forms
- Workspaces

4. On the Advanced Mapping page, click to open each category and review the icons next to each object to determine which objects you must map manually.

   The following table describes the icons.

Icon	Name	Description
	Awaiting Mapping Review	Indicates that the system could not automatically match the object or one of its children to a corresponding object in the target instance. Objects marked with this icon must be mapped manually. New objects should not be mapped. Select Do Not Map from the drop-down menu to clear this icon for an individual object, or click Do Not Map to clear the icon for all unmapped objects.
	Mapping Completed	Indicates that the object and all children are mapped to objects in the target instance, or that they have been marked as Do Not Map. Nothing more needs to be done with these objects in Advanced Package Mapping.

> **Note:** You can run the mapping process without mapping all objects. The icon is for informational purposes only.

5. For objects awaiting mapping review, do one of the following:
   - To map each object individually, use the drop-down menu in the Target column to select the object in the target instance to which you want to map the source object. To leave an object unmapped, select Do Not Map in the Target column.
   - To automatically map all objects in a category that have different system IDs but the same object name as an object in the target instance, click Auto Map, select whether to ignore case and spaces when matching object names, then click OK.
   - To mark all unmapped objects as Do Not Map, click Do Not Map.

> **Note:** Click to enable filter fields that you can use to find specific objects in each mapping category. To undo your mapping selections, click Undo, then select whether to undo all mappings in the category or only the mappings on a single page. If you choose to undo all mappings, you will be returned to the categories list.

6. (Optional) To save your mapping selections and return to the categories list without committing changes to the target instance, click .
7. After you review and map all objects, click Execute.
8. Select I understand the implications of performing this operation, and click OK.
   When the mapping is complete, the Import and Install Packages page is displayed.

> **Important:** Advanced Package Mapping modifies the system IDs in the target instance. You must update any Data Feeds and Web Service APIs that use these objects with the new system IDs.

Task 4: Install the Package

1. From the menu bar, click > Application Builder > Install Packages.
2. In the Available Packages section, locate the package file that you want to install, and click the file name or at end of the row to open the Options menu.
3. In the Selected Components section, click the Lookup button to open the Package Selector window.
   - To select all components, select the top-level checkbox.
   - To install only specific global reports in an already installed application, select the checkbox associated with each report that you want to install.

> **Note:** Items in the package that do not match an existing item in the target instance are selected by default.

4. Under the Translation Option drop-down menu, select an option for each selected component. To use the same Translation Option for all selected components, select a method from the top-level drop-down list.
   Note: The Translation Option is enabled only when a language is selected.
   The following table describes the options.

Option	Description
Full Install	Installs the component and its translations from the selected languages.

Option	Description
Translations Only	Only installs the translations from the selected languages.

5. Under the Install Method drop-down menu, select an option for each selected component. To use the same Install Method for all selected components, select a method from the top-level drop-down list.
   The following table describes the options.

Option	Description
Create New Only	Only creates new fields and other elements in the applications, questionnaires, workspaces, data feeds, and dashboards specified in the package file. This option does not modify any existing elements on your instance of Archer. This is useful when you want to add functionality to an existing application, questionnaire, workspace, dashboard, data feed, or access role, but you do not want to risk making any unwanted changes to the existing elements of workspaces, data feeds, or dashboards. iViews that are not currently on the dashboards that are selected for the package install are created. **Note:** The Create New Only option does not apply to access roles or languages.
Create New and Update	Updates all elements in the applications, questionnaires, workspaces, data feeds, and dashboards as specified in the package file. This includes adding new elements and updating existing elements. Existing iViews on the dashboards that are selected for the package install are updated, and iViews that are not currently on the dashboards that are selected for the package install are created. **Note:** The Create New and Update option does not apply to access roles or languages.

6. Under the Install Option drop-down menu, select an option for each selected component. To use the same Install Option for all selected components, select an option from the top-level drop-down list.

The following table describes the options.

Option	Description
Do not Override Layout	Installs the component, but does not change the existing layout. This is useful if you have a lot of custom fields and formatting in your layout that you do not want to risk losing. You may have to modify the layout after installing the package to use the changes made by the package. **Note:** The Do not Override Layout option does not apply to access roles or languages.
Override Layout	Updates the layout as specified in the package file, overwriting the existing layout. **Note:** The Override Layout option does not apply to access roles or languages.

7. Click Continue to advance to the next object category in the Package Selector, and repeat steps 4 to 6. After reviewing all object categories, click OK.
8. To deactivate target fields and data-driven events that are not in the package, in the Post-Install Actions section, select the Deactivate target fields and data-driven events that are not in the package checkbox. To rename the deactivated target fields and data-driven events with a user-defined prefix, select Apply a prefix to all deactivated objects, and enter a prefix. This can help you identify any fields or data-driven events that you may want to review for cleanup post-install.
9. Click Install.
10. Click OK.

Task 5: Review the Package Installation Log

1. From the menu bar, click > Application Builder > Install Packages.
2. In the Package Installation Log section, click the package that you want to view.
3. In the Package Installation Log page, in the Object Details section, click View All Errors.

   > **Note:** To view individual logs, in the Errors column of the log you want to view, click the Failures link or Warnings link. Clicking View All Errors, Failures, or Warnings opens the specific errors on a different page.
4. Click the Export icon to export the log file.
5. Click Close.

For a list of packaging installation log messages and remediation information for common messages, see Package Installation Log Messages.

Performing Use Case Cleanup Post-Installation

Task 1: Review and fix dependencies on other use cases

After you have installed the use case, certain items may not appear or function as designed because they are dependent on use cases that you have not licensed. For example, a calculated field that references an application outside of this use case will not validate unless you have also licensed another use case that contains that application. The following sections list the most common dependencies and provide steps to resolve the dependencies. In each section, the Related Use Case column lists the use case(s) that you may or may not have licensed. If you have licensed any of the listed use cases, you can skip that row. If you have not licensed any of the listed use cases, then the dependencies apply to your installation and you may want to resolve them.

> **Note:** Resolving these dependencies is not required. You may opt to skip this step, but leaving these fields as they are may cause confusion or generate calculation errors.

Review the following sections and resolve any dependencies that apply to your installation. You only need to resolve any dependencies that apply to use cases you have not licensed.

Task 2: Delete obsolete objects

Packaging does not delete obsolete objects. Delete these objects because they may affect how the applications function. Follow these guidelines:

- If you select Override Layout when you install the package, the package installation process removes old fields from the layout, if those fields do not also exist on the Source Package layout. All fields removed from the layout are in the Available Fields list.
- Evaluate your need for certain data driven events (DDE), pre-existing rules, and actions that were not updated through Packaging. Delete any obsolete rules and actions.
- Verify the DDE and calculation order and update it if necessary.
- Evaluate pre-existing notifications and reports that Packaging did not update. Delete obsolete notifications and reports.

To ensure that all obsolete objects are deleted, compare the *Data Dictionary* to your environment. For more information about objects, see "Packaging" in the Archer Online Documentation.

Task 3: Validate formulas and calculation orders

Follow these guidelines on validating formulas and calculation orders:

- The packaging process logs an error if a formula does not validate. This error may be caused by a formula that references applications or fields that do not exist in the instance and were not part of the package (for example, fields in applications that are part of a different use case). Review those fields to determine if they are needed.
  - If a field is needed, modify the formula to remove references to applications or fields that do not exist in your instance. Fields that do not exist in your instance are identified with an exclamation mark.
  - If a field is not needed, delete the field or remove it from the layout. If the field is not deleted, removing the formula prevents errors from being written in the log files when records are saved.
- Verify the order of calculations for each application and sub-form in the use case. See the *Data Dictionary* for calculation orders for each individual application or sub-form.
- Update the order of calculations as needed for each application and subform in the use case.

For more information about deleting objects, see "Deleting Fields" in the Archer Online Documentation.

Task 4: Verify key fields

Packaging does not change key fields. To verify the key fields in each application, see the *Data Dictionary*.

Task 5: Update record permissions fields

Packaging does not remove inherited record permissions fields or user/groups populated in a record permissions field. To verify the record permissions fields in each application, see the *Data Dictionary*.

Setting Up CMMC Assessment Data Feeds

Import the CMMC: Allocate Requirements data feed.

Task 1: Import a Data Feed

1. From the menu bar, click > Integration > Data Feeds.
2. Select the data feed you want to configure.
3. On the General tab, in the General Information section, select Active.
4. Select a data feed and go to the Source Connection tab of the data feed.

5. In the Logon Properties section, do the following:
   a. In the URL field, type: *YourServerName*/*VirtualDirectoryName*/ws/search.asmx
   b. Do one of the following:
      - Specify whether the current instance is set up for anonymous authentication.
      - Specify whether the current instance uses Windows Authentication and enter the specific credentials.
   c. In the User Name and Password fields, type the username and password of a Platform user that has API access and access to all of the records on the Platform instance (from which the data feed originates).
6. In the Transport Configuration section, do the following:
   a. Do one of the following:
      - To run the report with Windows credentials, select the Use Windows Authentication option. Single Sign-On (SSO) must be configured to use this option.
      - To run the report by a specific user, enter the credentials of the account that will be running the report in User Name and Password.

        > **Note:** Use the account that has access role rights to the search.asmx page. The account could also be a content administrator with full access permissions to the content of the applications. Do not use the same account that you used to log on.
   b. In the Instance field, enter the name of the instance where the data feed originates (this is the same instance name you enter on the Login window).
7. Verify that key field values are not missing from the data feed setup window.
8. Do one of the following:
   - To continue configuring the data feed, go to the next task.
   - To finish setting up the feed later, click Save or Save and Close.

Task 2: Schedule a Data Feed

> **Important:** A data feed must be active and valid to successfully run.

When you schedule your data feed, the Data Feed Manager validates the information. If any information is invalid, the data feed displays an error message. You can save the data feed and correct the errors later, but the data feed does not process until you make corrections.

You can set up data feeds to run automatically at regular intervals. This reduces the time and effort required to import data from an external file. You can initiate data feeds at various times and configure them to run in regular increments for an indefinite period of time.

You can also run the data feed immediately.

To prevent excess server load, schedule data feeds on a staggered basis. You can schedule a maximum of 10 data feeds to run at a time. If more than 10 data feeds are scheduled, each remaining data feed executes as the previous one completes.

A reference feed allows you to specify another feed. This indicates to the Data Feed Service that this feed will start running as soon as the referenced feed completes successfully.

1. Go to the Run Configuration tab > Schedule section.
2. Do one of the following to schedule your data feed.

   Run on Schedule
   You can configure your data feed to run on a defined schedule.

   The following table describes the fields in the Run on Schedule option.

Field	Description
Start Date	Specifies the date on which the data feed schedule begins.
Start Time	Specifies the time the data feed starts running.
Time Zone	Specifies the time zone in which the data feed schedule begins.
Recurring	Specifies the interval in which the data feed runs, for example, Minutely, Hourly, Daily, Weekly, or Monthly. • Minutely. Runs the data feed by the interval set. For example, if you specify 45 in the Every list, the data feed runs every 45 minutes. • Hourly. Runs the data feed by the interval set, for example, every hour (1), every other hour (2) and so forth. • Daily. Runs the data feed by the interval set, for example, every day (1), every other day (2) and, so forth. • Weekly. Runs the data feed based on a specified day of the week, for example, every other Monday (2), every third Monday (3), and so forth. • Monthly. Runs the data feed based on a specified week of the month, for example, on the first Monday of every month, on the second Tuesday of every third month, and so forth.
Every	Specifies the interval of the frequency in which the data feed runs.
On	Specifies the frequency of the days of the week on which the data feed runs.
Weekday	Specifies the days of the week on which the data feed runs.

Run After
Runs a specified data feed before the current one. The Data Feed Service starts the current data feed after the referenced data feed completes successfully.

For example, you can select to have a Threats data feed run immediately after your Assets data feed finishes. From the Reference Feed dropdown, select the data feed that runs before the current data feed.

Run Now
Click the Run Now button in the toolbar on the Manage Data Feed page to run the data feed manually.

3. To save the data feed, click Save or Save and Close.

Setting Up CMMC Assessment Data Imports

Use the CMMC Management use case to import the CMMC Requirements and Objectives Data into the CMMC Requirements Catalog and CMMC Assessment Objectives applications.

Set Up a Data Import

To upload data into CMMC Requirements Catalog:

1. Go to the Manage Data Imports page.
    a. From the menu bar, click .
    b. Under Integration, click Data Imports.
2. To open the Data Import Wizard, in the Manage Data Imports section, select the application into which you want to import data.
3. In the General Information section, click Browse.
4. From the File Upload window, click Add New, and select your .csv file. Click OK.
5. In the Format Options section, leave all the fields as default, and click Next.
6. From the General Information section, in the Import Type drop-down list, select Create New Records.
7. In the Import Field Mapping section, ensure that all the values in the Application Fields row match the column headers. If the value does not match, click the drop-down list for the items, and select the appropriate value.
8. Click Next.

9. Ensure that the summary information from the Data Import Wizard is correct, and click Import.
10. Repeat steps 1–9 for CMMC Assessment Objectives Library application.

Appendix A: Package Installation Log Message Examples

When you install a package, certain error messages are expected, depending on which use cases you have licensed in your system.

The following table describe some of the most common error messages that you may see. You may use these as guidelines, but you should review your package installation log and determine any actions you need to take.

> **Note:** For information on the dependencies for each solution, see the *Data Dictionary*.

Object Type	Message	Explanation	Remediation
Alias	*Object Name* Alias was changed from *Original Alias* to *New Alias*.	This message is an informational warning indicating that the Alias was updated on the object. There are two reasons for an alias in the Target Instance to have been updated: • Update was in the Source Package. • Alias has to be unique in the Target Instance. If the alias already exists in Target, packaging adds a unique identifier to the end.	This message is only potentially an issue if the change occurs on a field that is utilized in a Mail Merge Template or Data Publication Service. In that scenario, update the DPS or the mail merge template with the new alias.

<table>
<tr><th>Object Type</th><th>Message</th><th>Explanation</th><th>Remediation</th></tr>
<tr><td>Application</td><td>Unable to save the unlicensed application Application Name.</td><td>This message is seen when you install an unlicensed application from the Enterprise Catalog package. The Enterprise Catalog package contains applications that are used in multiple use cases, but you can only install the Enterprise Catalog applications that are included in your licensed use cases.</td><td>If the application is not licensed, no action is necessary.

Note: If you later license a use case that contains that application, you may re-install the Use Case Name package in order to resolve this warning.

If the use case has not been updated, do the following:
1. Install the package for the use case containing the related application. You must have a license for the related application.
2. Reapply the original package to resolve the warning.

For more information, see the Data Dictionary for the Enterprise Catalog package.</td></tr>
</table>

Object Type	Message	Explanation	Remediation
Application	Installation completed with Advanced Workflow SAML signatures on an instance without SAML configured.	This message lets you know that the installation completed successfully, however an advanced workflow uses a SAML signature on an instance without SAML configured.	Do one of the following: • Update the user action node in the advanced workflow to use One-time PIN via Email or User Name and Password. For more information on adding a User Action Node, see the "Building Advanced Workflows" topic in the Archer Online Documentation. • Configure SAML SSO on your instance: set the Single Sign-On Mode in the Archer Control Panel to SAML. For more information, see "Configuring an Instance for Single Sign-on" in the Archer Control Panel Help.

Object Type	Message	Explanation	Remediation
Field	*Field Name* in the application *Application Name* cannot be changed from a private field to a public field.	This message is an informational warning notifying you that packaging does not change a private field in the target instance to a public field.	Change the field to public manually (optional).
Field	Field *Field Name* could not be saved due to inability to identify the related module.	This message is seen when a cross-reference or related record field could not be created because the related application does not exist in the target instance. This message usually occurs because the field is part of a related use case that is not licensed or has not been updated in the target instance.	If the use case is not licensed, no action is necessary. **Note:** If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning. If the use case has not been updated, do the following: 1. Install the package for the use case containing the related application. You must have a license for the related application. 2. Reapply the original package to resolve the warning. See the *Data Dictionary*.

Object Type	Message	Explanation	Remediation
Field	The calculated field *Field Name* in the application *Application Name* cannot be verified.	The formula in the calculated field is incorrect. Most often, this message occurs when the formula references a field in a related application and either the field or the application does not exist in the target instance or is not licensed. This may be because the application is in a related use case that has not been updated.	Do either of the following: • Modify the formula to remove the reference to the unavailable field. • Install the package for the use case containing the related application. (You must have a license for the related application), then reapply the original package to resolve the warning. See the *Data Dictionary*.

Object Type	Message	Explanation	Remediation
Field	Field *Field Name* was not found and removed from a collection.	This warning may be seen on Inherited Record Permission fields, cross-reference/related record fields (record lookup and grid display), or as a display field in a report. The warning means that the field could not be found in the target instance and was not included in the package. This is usually because the field is part of an application in a related core solution that has not been updated in the target instance or is not licensed.	1. Install the package for the use case containing the related application (to obtain the missing field). You must have a license for the related application. 2. Reapply the original package to resolve the warning. See the *Data Dictionary*. If you do not have a license for the related application, you may ignore this message, and the field remains omitted from the object.
Advanced Workflow	The advanced workflow was installed, but is inactive. Please review and activate.	All advanced workflows are installed as inactive. You must review and activate the workflow.	Go to the Advanced Workflow tab in the application or questionnaire, review the workflow, then click Activate.

Object Type	Message	Explanation	Remediation
Advanced Workflow	Minor failure: Advanced workflow HTTP request error: 404 not found.	This failure message may appear if certain services were not running when you installed the package.	1. Verify that the Advanced Workflow Service and the Job Service are running. 2. Reapply the package.
Access Role	Access rights to the following page could not be configured due to missing module *Module Name*.	The *Module Name* application or questionnaire belongs to a use case that you have not licensed or does not exist in the instance.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Access Role	The following page referenced in a link cannot be resolved: *Page Name*.	*Page Name* belongs to an application in a use case that you have not licensed.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.

Object Type	Message	Explanation	Remediation
Event Action	*Module Name DDE Name* was updated but has page layout discrepancies.	This warning usually occurs when a cross-reference or related record field is on the layout in the package but is not licensed or does not exist in the target instance. Occurs on Apply Conditional Layout actions.	Review the DDE and the layout and determine if any modifications should be made to the layout. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Field	Contained Reference field :*Field Name 1* was not found in the target instance and was removed from multi-reference field : *Field Name 2*.	*Field Name 1* references an application that does not exist in the target instance or is not licensed.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Field	Cross Reference View/Edit Display field : *Field Name 1* was not found in the target instance and was removed from field : *Field Name 2*.	*Field Name 1*, configured to display in the reference field grid, is missing from the application it belongs to.	No action is necessary. You can also add the field to the other application by installing the package that the related application belongs to.
Field	Related Record View/Edit Display field :*Field Name 1* was not found in the target instance and was removed from field : *Field Name 2*.	*Field Name 1*, configured to display in the reference field grid, is missing from the application it belongs to.	No action is necessary. You can also add the field to the other application by installing the package that the related application belongs to.

Object Type	Message	Explanation	Remediation
Field	History Log Field Selection field : *Field Name* was not found in the target instance and was removed from history log field : *History Log*.	This message usually occurs when a history log field includes a cross-reference or related record as a tracked field, but that cross-reference or related record could not be created because the related application either does not exist in the target or is not licensed.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Field	Inherited User/Group field : *Field Name 1* was not found in the target instance and was removed from field : *Field Name 2*.	*Field Name 1* belongs to an application in a use case that does not exist in the target or is not licensed.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
iView	The following page referenced in a link cannot be resolved: *Page Name*.	*Page Name* belongs to an application in a use case that does not exist in the target or is not licensed.	Modify the iView to remove the unresolved link or delete the iView If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Navigation Menu	Unable to update Navigation Menu *Application Name*. Field *Field Name* not found.	*Application Name* belongs to an use case that does not exist or is not licensed.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.

Object Type	Message	Explanation	Remediation
Report	*Report Name* report could not be created. There are no display fields for this report.	Occurs when no display fields could be included in the report because the fields do not exist in the target or are not licensed. This error is most common on statistics reports.	None.
Report	Display field : *Field Name* was not found in the target instance and was removed from report: *Report Name*.	*Field Name* belongs to an application in a use case that does not exist or that is not licensed.	If the report functions without that field, then no action is needed. Otherwise, modify the report or remove it. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Report	Field : *Field Name* referenced by a statistic step was not found in the target instance and was removed from report : *Report Name*.	*Field Name* belongs to an application in a use case that does not exist or is not licensed.	If the report functions without that field, then no action is needed. Otherwise, modify the report or remove it. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.

Object Type	Message	Explanation	Remediation
Report	Field : *Field Name* used for charting was not found in the target instance and was removed from report : *Report Name*.	*Field Name* belongs to an application in a use case that does not exist or is not licensed.	If the report functions without that field, then no action is needed. Otherwise, modify the report or remove it. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Report	Field : *Field Name* was not found in the target instance and the condition was removed from the filter.	Occurs when a filter condition in a report is referencing an application that does not exist or is not licensed.	If the report functions without that field, then no action is needed. Otherwise, modify the report or remove it. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.

Object Type	Message	Explanation	Remediation
Report	Module *Module Name* was not found and removed from a search report.	The *Module Name* application or questionnaire belongs to a use case that you have not licensed.	If the report functions without that field, then no action is needed. Otherwise, modify the report or remove it. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Report	Module *Module Name* was not found. The relationship and associated display fields were removed from a search report.	Occurs with n-tier reports when the report includes display fields from a related application that does not exist or is not licensed.	If the report functions without that field, then no action is needed. Otherwise, modify the report or remove it. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.
Workspace	The following module referenced in the Navigation menu could not be resolved: *Module Name*.	The *Module Name* application or questionnaire belongs to a use case that does not exist or is not licensed.	None. If you later license a use case that contains that application, you may re-install the *Use Case Name* package in order to resolve this warning.

Appendix B: Troubleshooting Archer CMMC Assessment

The following table provides information that may help you resolve errors encountered while completing the assessment process.

Scenario	Description	Resolution
Data feed fails	The data feed runs, but fails.	Do one of the following: • Ensure the data feed user account is active. 1. From the Administration menu, click Users, and select the user account for the data feed. 2. In the Account Maintenance section, in the Status field, select Active. 3. Click Save. • Verify that the same account is not being used for multiple data feeds. 1. From the menu bar, click > Integration > Data Feeds. 2. Click on each data feed and navigate to the Transport tab. 3. Ensure the user account in the User field is not being used for multiple data feeds. • Review the Source Connection tab for errors. 1. From the menu bar, click > Integration > Data Feeds. 2. Select the data feed that is not working and navigate to the Source Connection tab. 3. Verify that the URL is correct and ends in /ws/search.asmx. 4. Go to the Transport Configuration section. 5. Verify that the user name is typed correctly. 6. Verify that the password is typed correctly. 7. Verify that the instance matches the instance where you are trying to run the data feed.

<table>
<tr><th>Scenario</th><th>Description</th><th>Resolution</th></tr>
<tr><td>Data feed completes, but no controls are created</td><td>The data feed successfully runs, but no records are created</td><td>Verify that the data feed user on the transport tab has the correct permissions to run the data feed.
Log into the system as that data feed user and check the report that the data feed is referencing.
Note: If the expected content is there, then incorrect permissions is not the problem.
If the expected content is not there, then grant access to the user using access roles and/or record permissions.
Verify that the content is returning in the referenced report.
Verify that the Control Catalog records and Assessment Objectives are imported.</td></tr>
</table>

Appendix C: Troubleshooting Advanced Workflows

On this page

Advanced Workflow Job Troubleshooting properties

When troubleshooting Advanced Workflow errors, understanding the following properties in the Job Properties panel is helpful.

Tab	Property	Description
General	Iteration	Indicates how many times the record has gone through the workflow
General	Process Version	Indicates how the Advanced Workflow process in Manage Applications has changed since the job was created
General	Job State	Indicates the job status
Error History	N/A	Provides details on why the process resulted in an error

The following table describes additional options in the menu that can help you troubleshoot errors.

Option	Description
Refresh	Refreshes the page
Restart	Restarts the job from the beginning
Find	Searches the job based on input
Print/Save Image...	Prints the job
Delay Nodes	Lists all wait for content update nodes
Update Job	Updates a single job **Note:** This only works in versions 6.5 and later.
Show Hidden Components	Shows what a job looked like prior to running Bulk Update Jobs
Show Active Path Only	Shows only the nodes processed, and omits nodes with a status of skipped or planned

Troubleshoot Workflow Process Designer access errors

The following table shows errors you may encounter when attempting to access the Advanced Workflow tab in an application or questionnaire.

Error message	Resolution
None - Workflow Process Designer splash screen hangs.	Check to see if the Advanced Workflow Service is running. If it is not running, start the service.
Advanced workflow HTTP request error: 404 not found.	
The Workflow builder encountered an unexpected error. Please contact your system administrator for more details.	
An error occurred communicating with the server.	
The Advanced Workflow service is unavailable.	

Troubleshoot workflow validation errors

When you build an advanced workflow and click Save Workflow, the system validates all of your nodes and transitions and informs you if there are any configuration issues.

The following table describes some of the messages that you can encounter.

Error type	Error message	Description	Resolution
General			

Error type	Error message	Description	Resolution
	Advanced Workflow has unsaved changes. Please save or revert.	The advanced workflow must be saved separately from the application or questionnaire that it belongs to. If you save or close the application without saving the workflow, your changes will be lost.	Before you click Save or Apply in the application or navigate away from the page, make sure that you do one of the following: • Click Save Workflow to save any changes in your process. • Click  and select Revert to return to your most recent saved version of your process.
	The workflow does not start with a "Start" node.	A Start node is required.	Add a Start node.
	Node *Node Name* requires at least one outgoing transition.	All nodes except for a Stop node require at least one outgoing transition.	Add an outgoing transition from the node.
	Node *NN*: CUST Name is required.	All nodes require a name. This error only displays if you deleted the Name text from a node.	Select the node, and in the Name field, enter text.
Evaluate Content node			
	Node Evaluate Content requires one default transition.	The Evaluate Content node requires that you mark one outgoing transition as the default. If all the rules governing outgoing transitions evaluate to false, the workflow follows the default transition.	Select the Evaluate Content node, and in the Default Transition field, select a transition.

Error type	Error message	Description	Resolution
	Node Evaluate Content: Except for error and default transitions, each outgoing transition must be configured with one rule.	Other than the default transition or transitions marked as an error path, all outgoing transitions from an Evaluate Content node require a rule that defines under which conditions the workflow should follow that path.	Select the Evaluate Content node and add a new rule for each outgoing transition. For steps, see "Add an Evaluate Content Node" in the Archer Online Documentation.
Send Notification node			
	Notifications: A notification is required.	The Send Notification node requires that you select an on-demand notification template to use for the notification. **Note:** If you do not already have an on-demand notification template associated with the application or questionnaire, you must first create one.	Select the Send Notification node, and in the Notification field, select a notification template.
Update Content node			
	The option requires other text. Can't be selected. **Note:** This error displays in the Add Value dialog box.	Some Values List fields are configured to require that the user enter text in an Other text field if a particular value is selected. Advanced workflow cannot update these values.	Update a different value or configure the value list value not to require Other text.
User Action node			
	Node User Action layout is required.	You must select an existing layout or create a new layout for the User Action node.	Select the User Action node, and in the Layout section, select the layout that you want to use or create a new layout.

Error type	Error message	Description	Resolution
	Tasks: Group or Permissions field for assignees is required.	If you want to create a task from an User Action node, you must select either a User/Groups or a Record Permissions field to assign the task to.	Do the following: 1. Select the User Action node, and in the Assigned to field, click +. 2. Select the group or permissions field you want to use, and click Add.
	Tasks: Please select a priority for this task.	If you want to create tasks from a User Action node, Priority is a required field.	Select the User Action node, and in the Priority field, select a value.
	Tasks: Please enter the text for the task subject/task description/task resolution.	In the Subject/Description/Resolution fields, if you select Enter Text, you must enter the text you want to use.	Select the User Action node, and in the Subject/ Description/Resolution text field, enter your text.
	Tasks: Please select a field to use for the task subject/task description/task resolution.	In the Subject/Description/Resolution fields, if you select Choose Field, you must select a field to use.	Select the User Action node, and in the Subject/ Description/Resolution drop-down field, select the field that you want to use.
Wait for Content Update node			
	Node Wait for Content Update: Layout is required.	You must select an existing layout or create a new layout for the Wait for Content Update node to use.	Select the Wait for Content Update node, and in the Layout section, select the layout that you want to use or create a new layout.
Loops			

Error type	Error message	Description	Resolution
	A process loop was detected but none of the transitions within the loop were declared as being upstream. Please make one of the transitions within the loop an upstream transition.	You have created a loop in your workflow process, but none of the transitions in your loop is marked as looping.	Do the following: 1. Select the transition that completes the loop. 2. In the Transition Settings section, from the Looping Transition list, select Yes. 3. Click Save Workflow. When you save, the transition changes to a dashed line.
	An upstream transition was found outside of a process loop. Please verify that all upstream transitions are in process loops.	An upstream, or looping, transition is marked by a dashed line and is only necessary when part of a loop in your process. You may see this error if you created a loop and later deleted one of the nodes, leaving a looping transition that is no longer part of a loop.	Ensure that all dashed transitions are part of a loop in your process.

Troubleshoot errors in the enrolled content record

The following table describes errors you may encounter when working in a record that is enrolled in an advanced workflow.

Error message	Description	Resolution
Workflow job failed to start.	Content save fails if the record cannot be enrolled into an advanced workflow for any reason.	Contact your Archer administrator.

Error message	Description	Resolution
Cannot enroll content in advanced workflow. The content has already been enrolled and re-enrollment is not allowed for records in this application.	This content record has already been enrolled in advanced workflow and has a job associated with it. The advanced workflow creator has not allowed for records in this application to be re-enrolled in the workflow.	Contact your Archer administrator.
There was an error processing this record. Please contact your administrator and tell them this record could not go past the 'Node Name' stage.	The workflow job ran into an error at the *Node Name* node.	Use the Job Troubleshooting tool to investigate the error. For more information, see "Troubleshooting Errors in Running Workflows" in the Archer Online Documentation.
Cannot enroll content into advanced workflow. The rule conditions associated with workflow enrollment were not met.	The rule associated with the User Initiated enrollment option has not been met, so the record cannot be enrolled in advanced workflow.	Contact your Archer administrator.
Cannot transition to the next advanced workflow node. The rule conditions associated with the selected transition were not met.	The rule associated with the transition has not been met, so the record cannot transition to the next node.	Contact your Archer administrator.
Cannot enroll content into advanced workflow. You are not authorized to perform this action based on the permissions configured for enrolling content.	Only users who have been granted permissions to the User Initiated enrollment option can enroll the record in advanced workflow.	Contact your Archer administrator.

Error message	Description	Resolution
Cannot transition to the next advanced workflow node. You are not authorized to perform this action based on the permissions configured for this transition.	Only users who have been granted permissions to the transition can click the associated User Action button in the record and transition the record.	Contact your Archer administrator.

Troubleshoot errors in running workflows

If records are running into errors while moving through your workflow, you can open the Job Troubleshooting tool and look at the individual job details.

1. From the menu bar, click 🔧 > Advanced Workflow > Job Troubleshooting.
2. Locate your process (for example, by name), and double-click anywhere in that row to open the associated jobs.

   > **Note:** If there are no associated jobs, verify that your workflow is active, that you selected a content enrollment option, and that records have been created in the application or questionnaire.

3. Locate your job (the Reference number is the tracking ID of your content record), and double-click anywhere in the row to open the detail view. If the job is in an error state, a red error message displays in the upper-right corner of the grid.
4. Determine where the job got stuck. Locate the last selected (green) node.

Node states

The following table describes the node states.

State	Description	Appearance
Planned	Downstream from one or more other nodes that have yet to be completed or skipped. All nodes start as planned. It is unknown whether this node will be executed in a particular job.	Dark Gray
Selected	Either has no dependencies or all of its dependencies have been resolved and at least one of the transitions leading to this node was selected. The node must now be executed.	Green

State	Description	Appearance
Complete	Previously selected to be executed and the work that is represents has been completed.	Blue
Skipped	The node was downstream from one or more nodes and none of the transitions leading to this node were selected. The node does not need to be executed.	Light Gray

Transition states

The following table describes the transition states.

State	Description	Appearance
Planned	The transition has not been evaluated. All transitions start as planned.	Dark Gray
Selected	The source node of the transition is completed and either: • It is the only outgoing transition from that node. • The criteria for this transition have been met (either a user clicked an Action button for a transition from a User Action node, or a rule evaluated to true for a transition from an Evaluate Content node).	Green
Skipped	Either the source node of the transition was skipped or the source node was complete but the transition did not meet its criteria (an action button was not clicked or the rule evaluated to false).	Light Gray

5. Review any errors:
   a. Click anywhere in the grid to display the Job Properties panel.
   b. Scroll down to the Errors section.
   c. Hover over an error until an  icon appears, and click the icon.
   d. Note the timestamp of the error message.
6. Depending on which node caused the error, verify the following:
   - Evaluate Content node
     - Are the associated rules correct?
       - Did you make any changes to the fields that are being evaluated?

- Send Notification node
  - Is the on-demand notification configured correctly?
  - Are notifications enabled for your instance?
  - Are notifications enabled for the application or questionnaire?
- Update Content node
  - Is the node configured to update at least one field?
  - Did you change the validation on any of the fields being updated? For example, did you make a field required that was previously not required?
- User Action node
  - If you chose to create tasks, is Task Management enabled for the application or questionnaire?
  - Are all the fields required for Task Management also required in the record?
  - Do the fields that you selected to use for the task subject, description, due date, and resolution have values entered in them in the record?

7. Check the advanced workflow server log file (located in \\RSAarcher\Logging) for more information about the error. An example file name is InstanceName.AdvancedWorkflow.YYYYMMDD.xml.

   Note: The timestamps of all entries in the advanced workflow server log are in Coordinated Universal Time (UTC). The timestamps of errors in the Job Troubleshooting tool depend on the time zone of your instance.

   Note: It is recommended that you use the Job ID to find the actual error in the log message. For example, from a job in error, the comment might read "Node instance Update Content in job 4726:CUST did not select an outbound path." you would search for "4726:CUST" in the log.

8. Depending on the type of error encountered and your workflow process, determine how you want to handle the job.
   The following table describes the options.

Option	Description	Steps
Restart the job	Restarts the job from the beginning. Any work previously completed is reset and must be completed again.	1. From the menu, select Restart. 2. Click Restart Job.

Option	Description	Steps
Cancel the job	Cancels the job. Use this option if you no longer need the job or plan to recreate the record and trigger a new job.	1. From the menu, select Cancel. 2. Enter an optional comment, and click Cancel Job.
Reset a node	Resets the node as Selected and resets all downstream nodes as Planned. Use if you want to retry the node.	1. In the grid, select the node. 2. In the Actions section, click Reset.
Manually move to the next node	Use this option if you want the job to continue regardless of whether the node completed successfully. For example, you might want to use this option if a notification failed to send.	1. From the menu, select Activate. 2. In the grid, select the node. 3. In the Actions section, click Change State, and select Complete Work. 4. From the Completion Code list, select the transition that you want to follow. 5. Click Complete Work.

Create error paths

An error transition out of a node allows you to create a path for a workflow in the case that the node runs into an error. You might want to create error paths in your workflow if your jobs are running into the occasional error on a particular node and you want to force the job to continue on through the workflow instead of stopping. For example, if you have intermittent errors with your mail server, but do not want the job to stop just because a notification could not be sent, you might create an error path to allow the workflow to continue to the next node.

1. Add a User Action node to the grid.
2. In Node Properties panel, in the Name field, type Error.
3. In the Layout section, create and assign a layout that indicates an error.
4. Draw an outgoing transition from the node that is failing to the Error node.
5. In Transition Settings, from the Type list, select Error.
6. Draw an outgoing transition from the error node to the next node in your process.
7. To validate the new transitions and save your changes, click Save Workflow.
8. Click Save or Apply.
   - Click Save to save and exit.
   - Click Apply to apply the changes and continue working.