

Project Use Case Model Change Summary Table

Version	Name	Date	Description
1.0	Lauren Eagan Fernando Marquez Jesus Gutierrez Joaquin Hidalgo Cynthia Sustaita	02/06/2020	Page #2: Met to review RDD and discuss collectively what use cases will be used for the diagram.
1.1	Joaquin Hidalgo	02/06/2020	Defined use cases
1.2	Cynthia Sustaita Jesus Gutierrez	02/06/2020	Developed a color coordinating system for the diagram for clarity
1.3	Lauren Eagan	02/06/2020	Abstract Ideas
1.4	Fernando Marquez	02/06/2020	Provided feedback on ways to make the diagram more readable
2.0	Lauren Eagan Cynthia Sustaita	02/07/2020	Page #3: Met and updated based on Elsa's feedback Removed use cases related the system itself Modified the interaction between actors.
3.0	Fernando Marquez Cynthia Sustaita Joaquin Hidalgo	02/10/2020	Page #4 - #5: Update based on Elsa's and Ben's feedback Add actor and description More descriptive on use cases and actors
3.1	Lauren Eagan Cynthia Sustaita	02/16/2020	Created use case scenarios for level 1 use case diagram
3.2	Lauren Eagan Jesus Gutierrez	02/16/2020	Updated scenarios based off of Ben's feedback Completed level 1 use case scenarios
3.3	Cynthia Sustaita Joaquin Hidalgo Fernando Marquez	02/16/2020	Update and upload level 2 use case model based off of recordings and feedback given by Vince and Mrs. Elsa

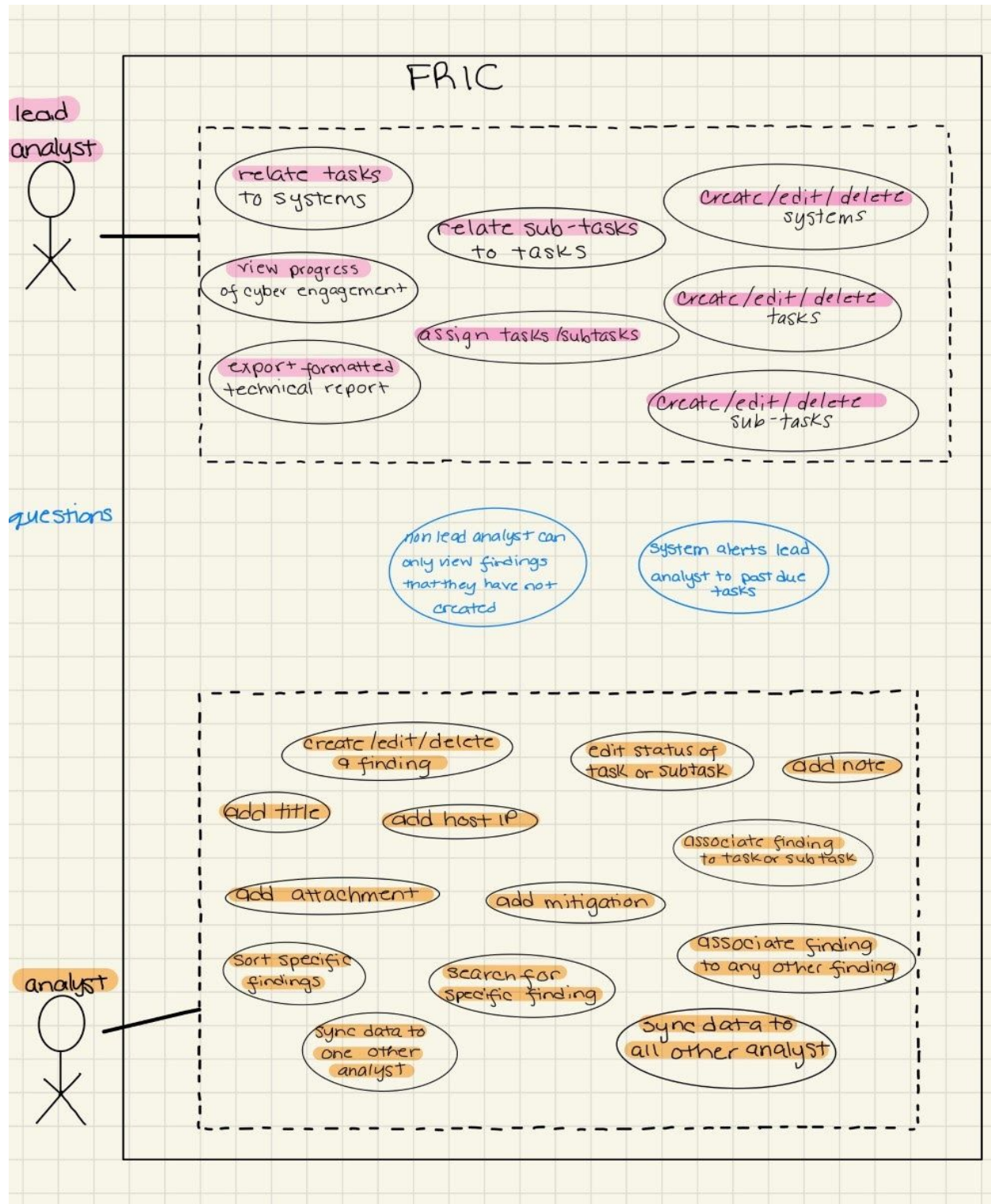
3.4	Joaquin Hidalgo Cynthia Sustaita Fernando Marquez	02/16/2020	Edit and upload level 2 use case model (manage tasks to analyst)
3.5	Cynthia Sustaita	02/16/2020	Deleted subtask use cases from diagram based on abstraction suggestion by Mrs. Elsa
3.5	Cynthia Sustaita Joaquin Hidalgo Lauren Eagan Fernando Marquez	02/16/2020	Modified use case scenarios for level 2 based on Mrs. Elsa's comments. Such changes include grammatical errors and re-wording of flow of events.
3.5	Fernando Marquez Jesus Gutierrez	02/16/2020	Revise final use case model report
3.5	Cynthia Sustaita Joaquin Hidalgo	02/16/2020	Added additional alternative to first use case scenario
3.6	Lauren Eagan Cynthia Sustaita	02/21/2020	Updated level 2 use case diagram based on Elsa's feedback during our guidance meeting. Such changes include adding the archive, view progress, and generate report use cases.
3.7	Joaquin Hidalgo	02/23/2020	-updated on feedback for use-case diagram to move along the rest of our assignments to ensure we going in the right direction -added new use-case to bottom page version 3.7
3.8	Lauren Eagan Cynthia Sustaita	4/15/2020	Updated model and added new version to the document based off of feedback on feasibility

Use Case Model Template

Use Case Level: Level 1

Version: 1.0

Use Case Model:

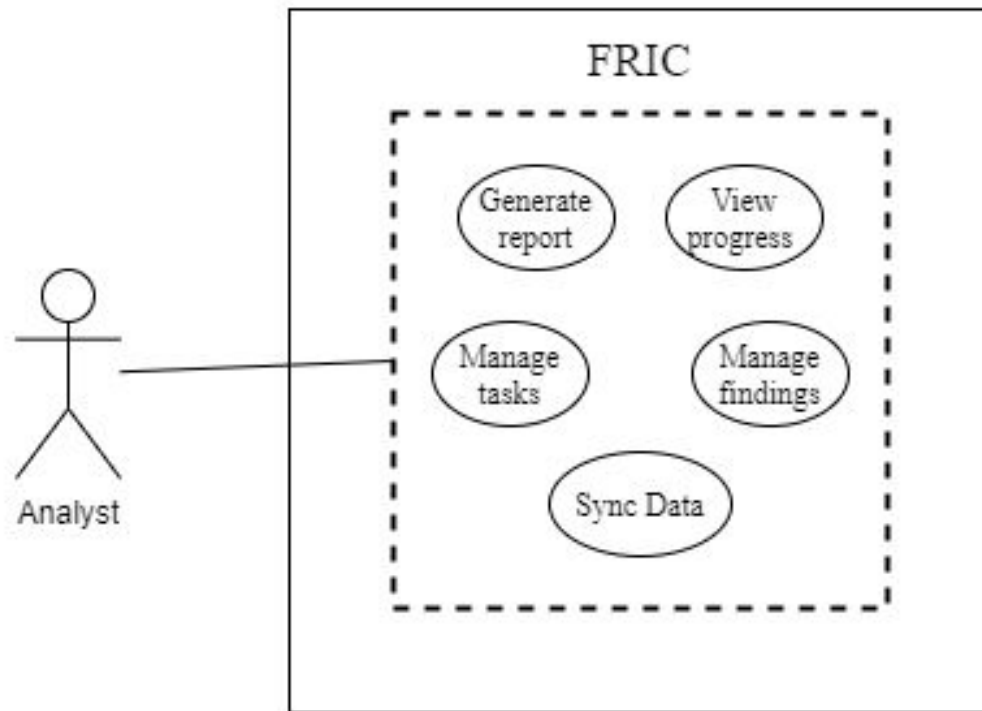


Use Case Model Template

Use Case Level: Level 1

Version: 2.0

Use Case Model:

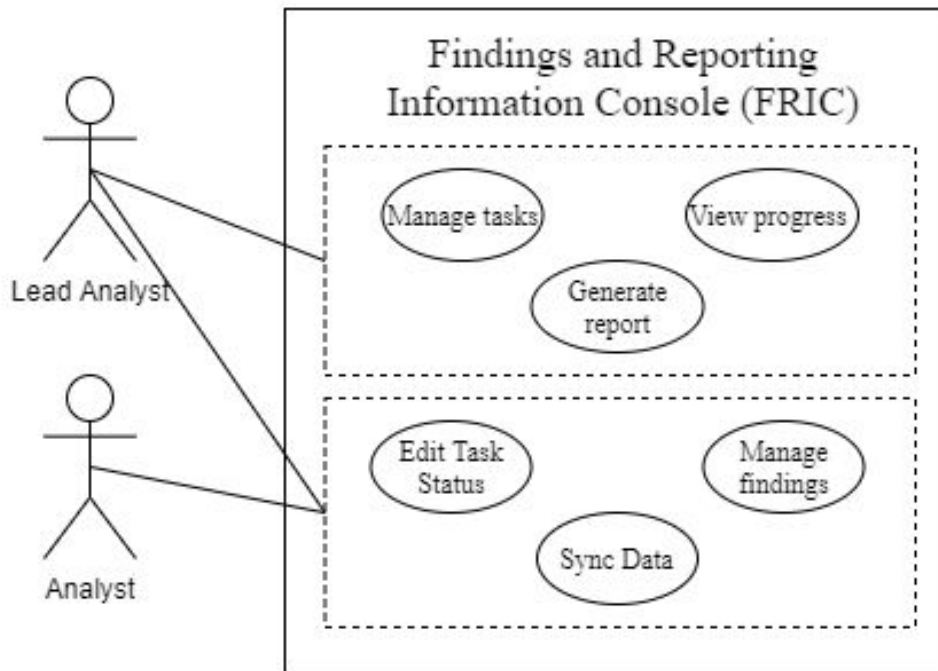


Use Case Model Template

Use Case Level: Level 1

Version: 3.0

Use Case Model:



Description of use cases:

- **Manage tasks:**
 - *The system allows a lead analyst to create/edit/delete tasks and sub-tasks, as well as relate a sub-task to a task, a task to a sub-task, or a task to a system. Additionally, this system allows a lead analyst to assign such tasks or sub-tasks to other analysts. While managing tasks, the lead analyst should be able to edit a task's or sub-tasks' attributes to help explain the progress of their work.*
- **Edit task status:**
 - *The system must allow any analyst to edit the status of a task or sub-tasks and to associate such task or sub-tasks to a specific finding.*
- **Manage findings:**
 - *The system allows any analyst to create/edit/delete a finding. Findings are to be tagged as vulnerable, informational or other. While managing findings, the analysts are allowed to edit a finding's attributes and search a finding by the type of tag it is or specific attribute. The system will also allow an analyst to attach a finding to a subtask. If no subtask exists under a task, the finding then can be attached to a task then be able to change that finding to a subtask later on, once created.*
- **Generate report:**

- *System allows analysts to generate an Emerging Result Brief (ER-B) and export a formatted technical report for PM use straight from the program. Such reports would be made up of observations regarding all the activities that were acquired during the event as either successfully or unsuccessfully, findings, its results and current progress.*
- **Sync data:**
 - *The system allows all analysts to push data to the lead analyst or any other analyst and vice versa.*
- **View progress:**
 - *The system allows analysts to view progress of the system, task or subtasks. The progress is the current state of the system, task or subtask. In-order to give analysts the ability to view the progress of the system, task or subtask as either not started, in progress, not do-able, completed or past due.*

Description of actors:

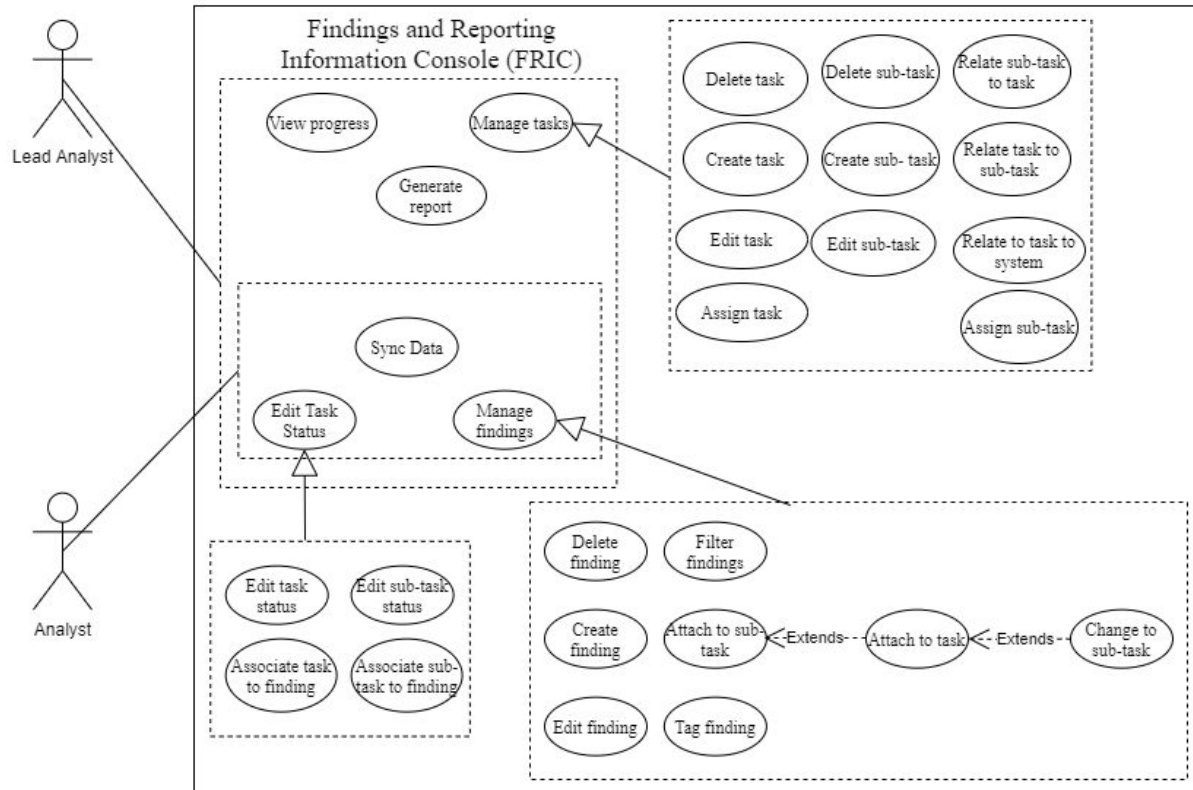
- **Lead Analyst:**
 - *Lead analysts are a part of the Cyber Experimentation and Analysis Division (CEAD) that execute cyber experiments and create tasks based on such results and assign them to one analyst.*
- **Analyst:**
 - *An analyst is a person from the CEAD that utilizes the FRIC system to work on tasks and to exploit and assess vulnerabilities that will be in sync with a lead analyst.*

Use Case Model Template

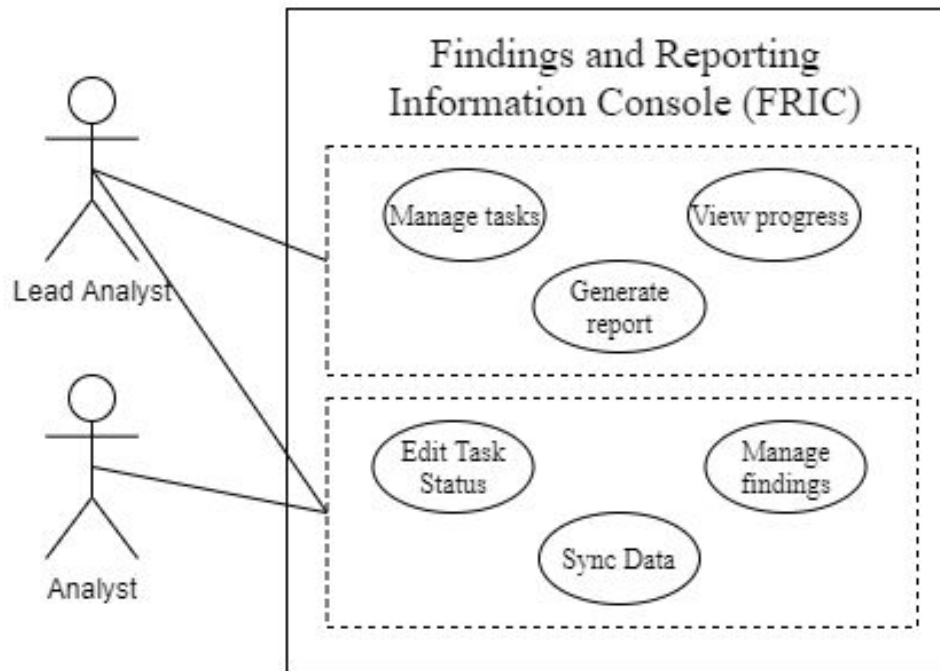
Use Case Level: Level 2

Version: 3.1

Use Case Model:



Use Case Scenarios - Level Case 1



Use Case Scenario Name: Sync Data.

Description: The system allows all analysts to push data to the lead analyst or any other analyst and vice versa. If needed, an analyst or lead analyst can also pull data from another analyst to view their findings. .

Actors: Lead analyst, analyst.

Pre-condition: An analyst must have a task or subtask assigned and such assignment must have some kind of progress to push data for other analysts to see.

Trigger-condition: Analyst has findings they wish to share with their team.

Flow of events:

- Step 1: Actor: Selects option to push data.
- Step 2: System: Shows list of available IP's and initials to choose from.
- Step 3: Actor: Select an individual to share data with or sync to all.
- Step 4: System: Database pushes the information requested to be synced.
- Step 5: System: Displays confirmation the data has been synced.
- Step 5: End of use case

Alt: Actor: Selects to sync to all.

Use Case Scenario Name: Manage tasks

Description: The system allows a lead analyst to create/edit/delete tasks, as well as relate a sub-task to a task, a task to a sub-task, or a task to a system. Additionally, this system allows a lead analyst to assign such tasks or sub-tasks to other analysts. While managing tasks, the lead analyst should be able to edit a task's or sub-tasks' attributes to help explain the progress of their work.

Actors: Lead analyst

Pre-condition: A user has been assigned the position of lead analyst.

Trigger-condition: At the beginning of the week, an event begins and is sent to the lead analyst.

Flow of events:

- Step 1: Actor: Lead analyst creates a task based on the event's testing plan.
- Step 2: System: Shows list of available analysts to assign this task to.
- Step 3: Actor: Selects an analyst and assign task.
- Step 4: System: Displays confirmation the task was assigned
- Step 5: System: Notifies analyst they were assigned a task
- Step 5: System: Database maintains a record of analyst's work (E.g. task progress, findings, etc).
- Step 6: End of use case

Use Case Scenario Name: Generate report

Description: System allows lead analysts to generate an Emerging Result Brief (ER-B) and export a formatted technical report for PM use straight from the program. Such reports would be made up of observations regarding all the activities that were acquired during the event as either successful or unsuccessful, findings, its results and current progress.

Actors: Lead analyst

Pre-condition: Event is in progress and has some progress or findings.

Trigger-condition: Lead analyst needs to send a report of the event and it's current progress.

Flow of events:

- Step 1: Actor: Lead analyst select the option to generate report
- Step 2: System: Shows list of properties to include: All findings/select findings successful/unsuccessful, results, and current progress.
- Step 3: Actor: Selects all findings, current progress, and submits report.
- Step 4: System: Shows list of available IP's and initials to choose from.
- Step 5: Actor: Selects who they would like to send it to.
- Step 6: System: Generates report and displays confirmation to actor.
- Step : End of use case

Use Case Scenario Name: View progress

Description: The system allows analysts to view progress of the system, task or subtasks. The progress is the current state of the system, task or subtask. In-order to give analysts the ability to view the progress of the system, task or subtask as either not started, in progress, not do-able, completed or past due.

Actors: Lead analyst

Pre-condition: A task has been assigned to an analyst.

Trigger-condition: Lead analyst wishes to view the current progress of the analyst who is assigned the task.

Flow of events:

- Step 1: Actor: Lead analyst selects option to view progress.
- Step 2: System: Displays list of current tasks and the analysts they have been assigned to.
- Step 3: Actor: Selects the analyst they wish to view.
- Step 4: System: Displays current progress of the task to lead analyst.
- Step : End of use case

Use Case Scenario Name: Edit task status

Description: The system must allow any analyst to edit the status of a task or sub-tasks and to associate such task or sub-tasks to a specific finding.

Actors: Lead analyst, analyst

Pre-condition: Analyst is assigned a task.

Trigger-condition: Analyst has new findings they wish to associate with a task.

Flow of events:

- Step 1: Actor: Selects the task they would like to edit.
- Step 2: Actor: Selects edit status of task.

- Step 3: System: Displays status options.
- Step 4: Actor: Selects status: new findings.
- Step 5: Actor: Selects associate new findings.
- Step 6: Actor: Selects completed.
- Step 7: System: Displays confirmation of status edit.
- Step : End of use case.

Use Case Scenario Name: Manage findings

Description: The system allows any analyst to create/edit/delete a finding. Findings are to be tagged as vulnerable, informational or other. While managing findings, the analysts are allowed to edit a finding's attributes and search a finding by the type of tag it is or specific attribute. The system will also allow an analyst to attach a finding to a subtask. If no subtask exists under a task, the finding then can be attached to a task then be able to change that finding to a subtask later on, once created.

Actors: Lead analyst, analyst

Pre-condition: Lead analyst or analyst are assigned a task.

Trigger-condition: Lead analyst or analyst wishes to be able to create/optimize findings.

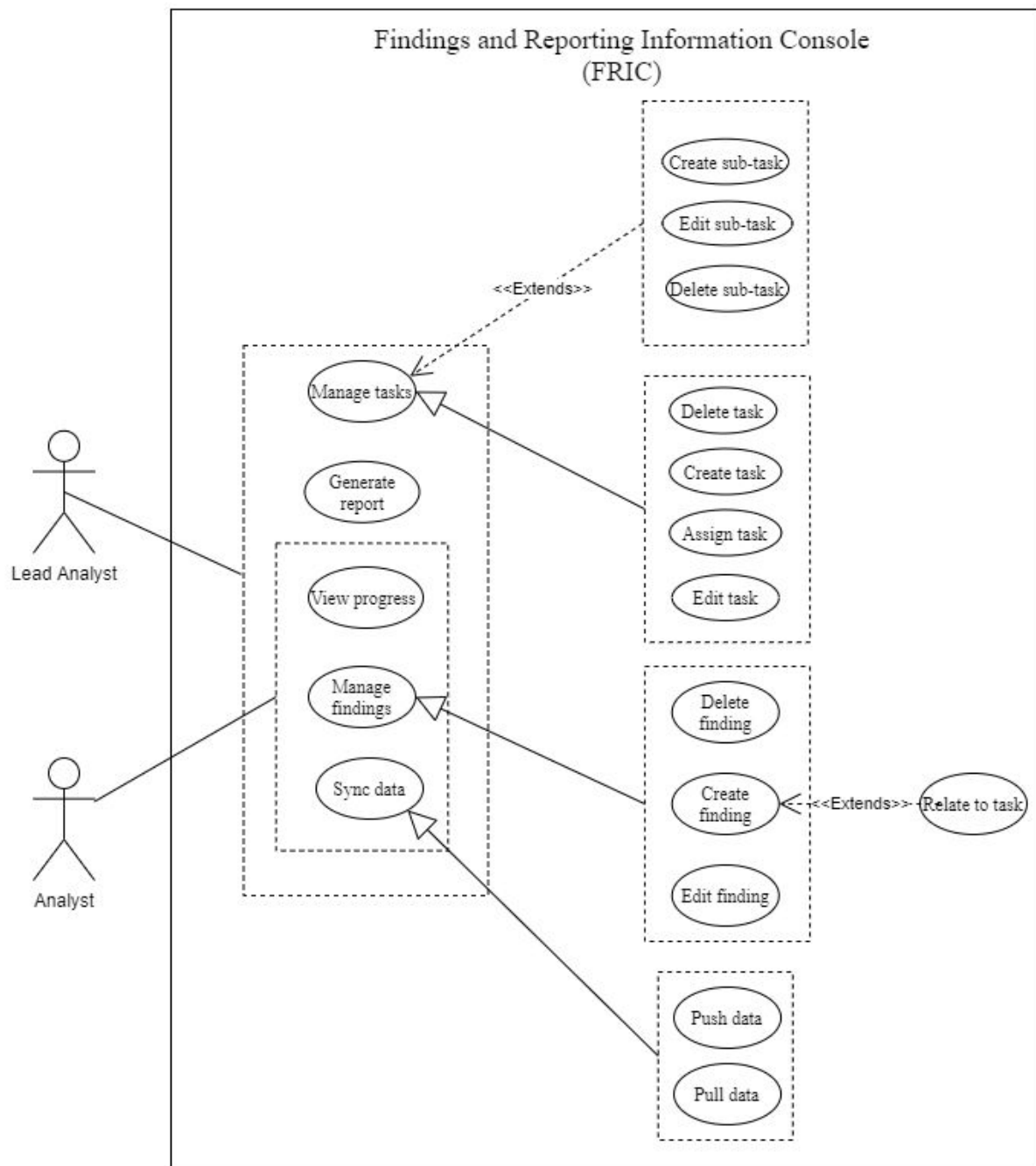
Flow of events:

- Step 1: Actor: Lead analyst or analyst selects edit/delete a finding.
- Step 2: System: Displays list of tagged findings, prompts to search a finding by a specific attribute.
- Step 3: Actor: Selects specific finding/s.
- Step 4: System: Displays information about that finding.
- Step 5: Actor: Lead analyst or analyst edits/deletes finding.
- Step 6: Actor: Selects completed.
- Step 7: System: Displays confirmation of finding edit/delete.
- Step : End of use case.

Use Case Level: Level 2

Version: 3.3

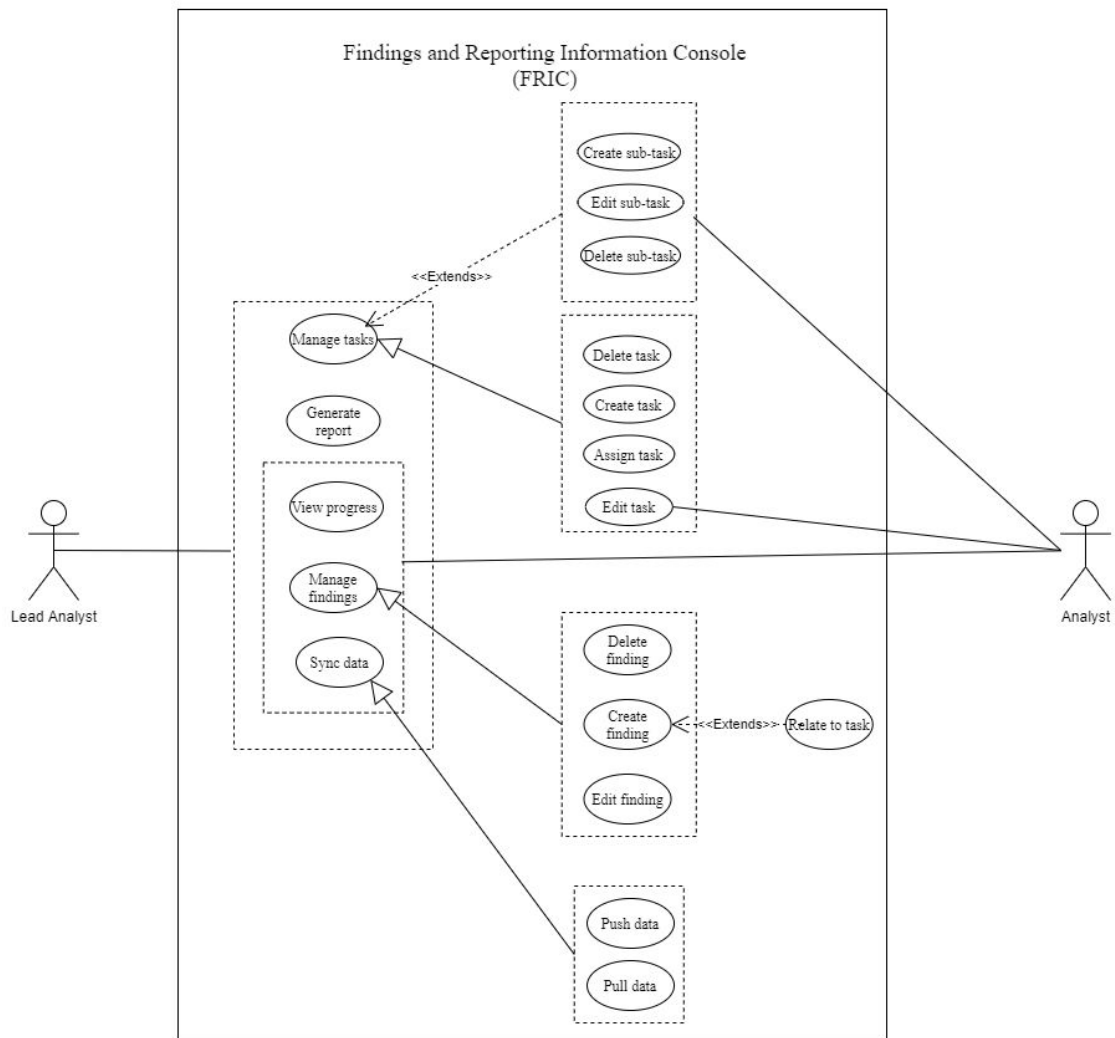
Use Case Model:



Use Case Level: Level 2

Version: 3.4

Use Case Model:

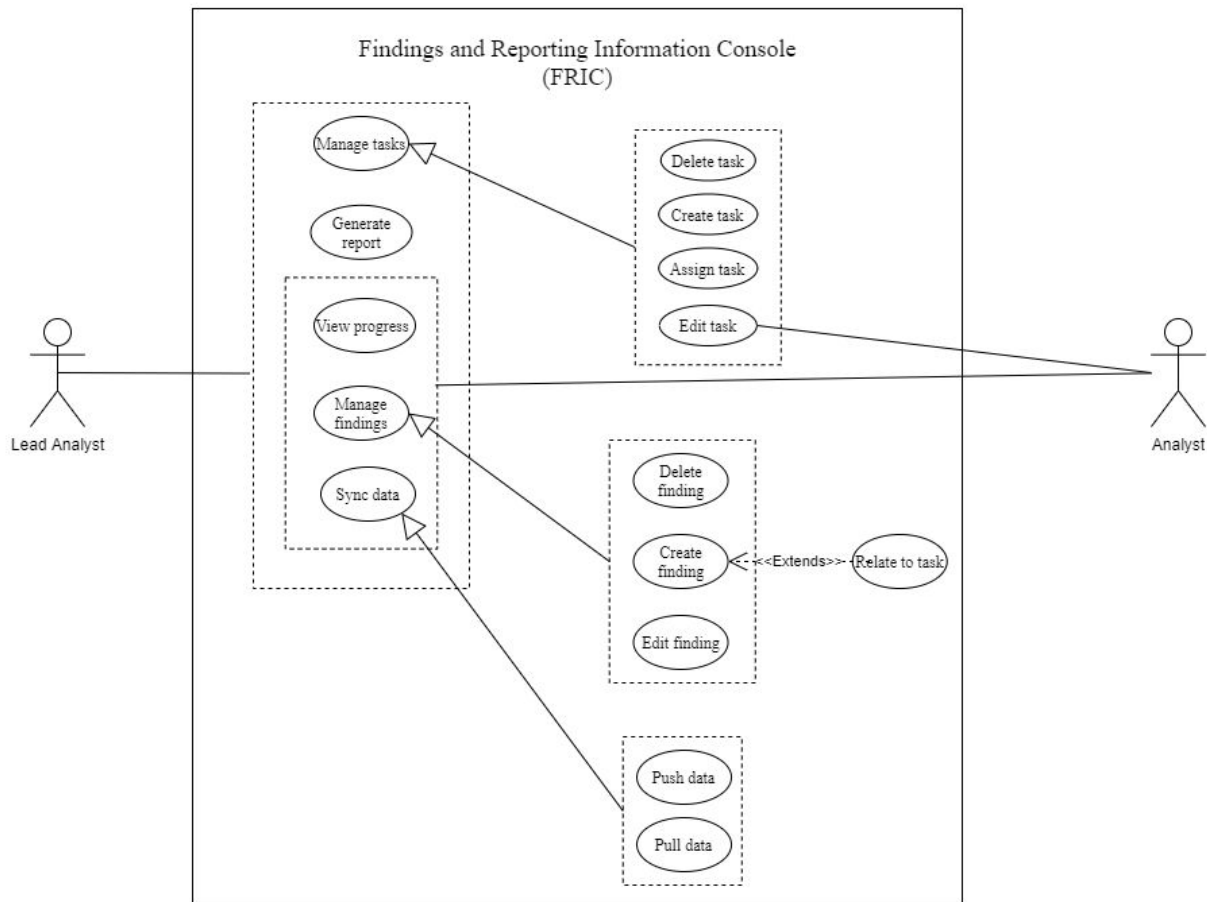


Use Case Scenarios - Level Case 2

Use Case Level: Level 2

Version: 3.5

Use Case Model:



Description of use cases:

- **Manage tasks:check chat**
 - The system allows a lead analyst to create/edit/delete tasks and sub-tasks, as well as relate a sub-task to a task, a task to a sub-task, or a task to a system. Additionally, this system allows a lead analyst to assign such tasks or sub-tasks to other analysts. While managing tasks, the lead analyst should be able to edit a task's or sub-tasks' attributes to help explain the progress of their work.
- **Manage findings:**
 - The system allows any analyst to create/edit/delete a finding. Findings are to be tagged as vulnerable, informational or other. While managing findings, the analysts are allowed to edit a finding's attributes and search a finding by the type of tag it is or specific attribute. The system will also allow an analyst to attach a finding to a subtask. If no subtask exists under a task, the finding then can be

attached to a task then be able to change that finding to a subtask later on, once created.

- **Generate report:**
 - *System allows analysts to generate an Emerging Result Brief (ER-B) and export a formatted technical report for PM use straight from the program. Such reports would be made up of observations regarding all the activities that were acquired during the event as either successfully or unsuccessfully, findings, its results and current progress.*
- **Sync data:**
 - *The system allows all analysts to push data to the lead analyst or any other analyst and vice versa. This gives the opportunity for analysts to share what data they have and keep up to date with other people's data.*
- **View progress:**
 - *The system allows analysts to view progress of the system, task or subtasks. The progress is the current state of the system, task or subtask. In-order to give analysts the ability to view the progress of the system, task or subtask as either not started, in progress, not do-able, completed or past due.*

Description of actors:

- **Lead Analyst:**
 - *Lead analysts are a part of the Cyber Experimentation and Analysis Division (CEAD) that execute cyber experiments and create tasks based on such results and assign them to one analyst.*
- **Analyst:**
 - *An analyst is a person from the CEAD that utilizes the FRIC system to work on tasks and to exploit and assess vulnerabilities that will be in sync with a lead analyst.*

Use Case Scenario Name: Create task (The lead strictly assigns tasks to analysts)

Description: The system allows the lead analyst to create a task under manage tasks. Creating the task is what usually the lead analysts know what to do before the event is started and ordered by the end-client.

Actors: Lead analyst

Pre-condition: A user has logged in as a Lead Analyst

Trigger-condition: Lead analyst initiates the task creation by selecting and pushes button, to create task

Flow of events:

- Step 1: Lead Analyst fills in information needed to describe the task (title, description, status, priority and due date).
- Step 2: Lead Analyst assigns the task to analyst(s).
- Step 3: System displays confirmation message.
- Step 4: Lead Analyst confirms task and clicks on the save button for this specific task.
- Step 5: System saves and updates the current task's under the system.
- Step 6: End of use case.

Alt 1: Task doesn't need to be assigned to someone right away.

- Step 4.1 Lead Analyst can choose not to assign tasks.
- Step 4.2 System leaves the task assigned to section blank.
- Step 4.3 Lead Analyst can come back and assign this task to an analyst in the future.
- Step 4.4 System updates the current task's under the system.

Alt: Lead analyst allows analyst to choose their own tasks

- Step 4.1: Lead Analyst can choose not to assign tasks.
- Step 4.2: System leaves the task assigned to section blank.
- Step 4.3: Lead Analyst gives the ability to analyst(s) to pick their own tasks.

Use Case Scenario Name: Delete task

Description: The system allows the lead analyst to delete a task under manage tasks. Deleting a task is given to the lead analyst to archive any unwanted tasks.

Actors: Lead analyst

Pre-condition: A user has logged in as a lead analyst, there are tasks in the system..

Trigger-condition: Lead analyst has noted any tasks that they wish to remove from the system to be achieved.

Flow of events:

- Step 1: System Displays tasks as a list under 'manage tasks' section.
- Step 2: Lead Analyst Selects the option to delete task(s).
- Step 3: System Gives delete option: delete task and all associated subtasks or findings, delete only subtask or finding, delete only task.
- Step 4: Actor Selects delete task and all associated subtasks or findings.
- Step 5: System displays confirmation message
- Step 6: Lead Analyst Archive unwanted task(s).
- Step 7: System updates the current task(s) under the system.
- Step 8: End of use case.

Use Case Scenario Name: Edit task

Description: The system allows the lead analyst and analyst to edit a task under manage tasks. Editing the task gives one the ability to change the title, description, status, priority and due date of a given task.

Actors: Lead analyst, analyst

Pre-condition: A user has logged in as a Lead Analyst or Analyst.

Trigger-condition: Lead analyst or Analyst wants to update the current task.

Flow of events:

- Step 1: Lead Analyst/Analyst selects the option to manage the tasks.
- Step 2: Lead Analyst/Analyst selects to edit a certain task.
- Step 3: Lead Analyst/Analyst overrides the previous edit and saves.
- Step 4: System displays confirmation message.
- Step 5: End of use case.

Use Case Scenario Name: Delete finding

Description: The system allows any analyst to delete any findings that are under a task whether it was chosen or assigned to.

Pre-condition: An analyst must be assigned to the task or system to be given this permission

Trigger-condition: Analyst has reviewed the current findings and knows that this certain finding is no longer usable, thus deletes finding.

Flow of events:

- Step 1: Any Analyst selects the option to manage findings.
- Step 2: Any Analyst selects the option to delete a finding.
- Step 3: Any Analyst selects the certain finding that is going to be removed.
- Step 4: System displays confirmation message
- Step 5: System updates the new system with the certain finding deleted.
- Step 6: End of use case.

Use Case Scenario Name: Create finding

Description: The system should allow both a lead analyst and an analyst to create a finding or findings. The new finding will consist of a title, description, status, priority, and due date of the given/new task.

Actors: Lead analyst, analyst

Pre-condition: A user has logged in as a lead analyst or analyst

Trigger-condition: Lead analyst or analyst wants to create a new finding

Flow of events:

- Step 1: Lead Analyst/Analyst selects the option to create a new finding.
- Step 2: System gives reading and writing permission to lead analyst/ analyst.
- Step 3: Lead Analyst/Analyst: selects to add appropriate information towards the document.
- Step 4: Lead Analyst/Analyst submits new finding into the system.
- Step 5: System displays confirmation message.
- Step 6: End of use case.

Use Case Scenario Name: Relate to task

Description: Extension towards "Create Finding". Once the new finding has been created, the system will allow for the lead analyst or analyst to relate that finding to a task.

Pre-condition: Lead analyst or analyst has created a finding

Trigger-condition: Lead analyst or analyst wants to relate that new finding to a task

Flow of events:

- Step 1: System displays list of findings created, or findings that are not assigned to a specific task(s).
- Step 2: Lead Analyst/Analyst: Select finding(s) to relate to a task(s).
- Step 3: Lead Analyst/Analyst: Select task(s) for specific finding(s).
- Step 4: System displays confirmation message.
- Step 5: End of use case.

Use Case Scenario Name: Edit finding

Description: The system allows any analyst to edit any specific findings that are under a task whether it was chosen or assigned to.

Pre-condition: An analyst must be assigned to the task or system to be given this permission

Trigger-condition: Analyst has reviewed the current findings and knows that this certain finding is no longer up to date and wishes to edit any attributes about this finding.

Flow of events:

- Step 1: Any Analyst selects the option to manage findings.
- Step 2: Any Analyst selects the option to edit a finding.
- Step 3: Any Analyst selects the certain finding that is going to be edited.
- Step 4: System gives reading and writing permission to the user.
- Step 5: Any Analyst selects to re-write the previous text section.
- Step 6: Any Analyst confirms the changes and saves.
- Step 7: System displays confirmation message
- Step 8: System updates the new system with the new finding time stamp.
- Step 9: End of use case.

Use Case Scenario Name: Pull data

Description: The system allows any analyst to receive (pull) data that has been pushed by other analysts on the system that they are working on.

Pre-condition: Any analyst must have saved their progress and have data available to pull from other analysts.

Trigger-condition: Analyst when clicks on button to pull data. A change must have been made to the overall main project since last time clicking on, pull data button.

Flow of events:

- Step 1: System prompts confirmation message to pull data from all analysts.
- Step 2: System prepares available data to be received by the who is pulling data.
- Step 3: System shows the differences between the current data on local computer and overall data from the main project.
- Step 4: Analyst looks at differences made between their data and data they are about to pull and selects manually selects what differences they want to keep.
- Step 5: System updates the local system with the new updates and time stamps changes.
- Step 6: End of use case.

Alt:

- Step 1.1: Analyst prompts confirmation message to pull data from selected specific group (just analyst).
- Step 1.2: System prepares available data based on the group of people analyst wants to receive data from (just analyst).
- Step 1.3: System shows the differences between the current data on local computer and specified group's project data.

Use Case Scenario Name: Push data

Description: The system allows any analyst to upload (push) their own data that has been made on their local computer to the main projects for other people to receive.

Pre-condition: Any analyst must have saved their progress and have data updated since the last time they pushed.

Trigger-condition: Analyst when clicks on button to push data. A change must have been made to the overall main project since last time clicking on, push data button.

Flow of events:

- Step 1: Any Analyst selects to share information with all analysts.
- Step 2: System prompts confirmation message to push data.
- Step 3: System prepares data to be received by the main project.
- Step 4: System main project receives updated data and merges with previous main project.

- Step 5: System updates the main project with the new changes and time stamps changes.
- Step 6: System makes new updated main project available to pull for selected group of analysts.
- Step 7: System gives out notification to selected group, that this analyst has pushed new data.
- Step 8: End of use case.

Alt:

- Step 1.1: Analyst selects specific group (just analyst) to push data.
- Step 1.2: System recognizes option chosen to make data available only to certain group selected.
- Step 1.3: System based on chosen group selected, it gives the updated data from local computer available to be pulled.

Use Case Scenario Name: Generate report

Description: System allows lead analysts to generate an Emerging Result Brief (ER-B) or Risk Assessment report and export a formatted technical report for PM use straight from the program. Such reports would be made up of observations regarding all the activities that were acquired during the event as either successful or unsuccessful, findings, its results and current progress.

Actors: Lead analyst

Pre-condition: Event is in progress and has some progress or findings.

Trigger-condition: Lead analyst needs to send a report of the event and it's current progress.

Flow of events:

- Step 1: Lead analyst selects the option to generate a report.
- Step 2: System shows list of properties to include: All findings/select findings successful/unsuccessful, results, and current progress.
- Step 3: Lead analyst selects all findings, current progress, and submits report.
- Step 4: System shows list of available IP's and initials to choose from.
- Step 5: Lead analyst elects who they would like to send it to.
- Step 6: System generates report and displays confirmation message.
- Step : End of use case.

Use Case Scenario Name: View progress

Description: The system allows analysts to view progress of the system, task or subtasks. The progress is the current state of the system, task or subtask. In-order to give analysts the ability to view the progress of the system, task or subtask as either not started, in progress, not do-able, completed or past due.

Actors: Lead analyst

Pre-condition: A task has been assigned to an analyst.

Trigger-condition: Lead analyst wishes to view the current progress of the analyst who is assigned the task.

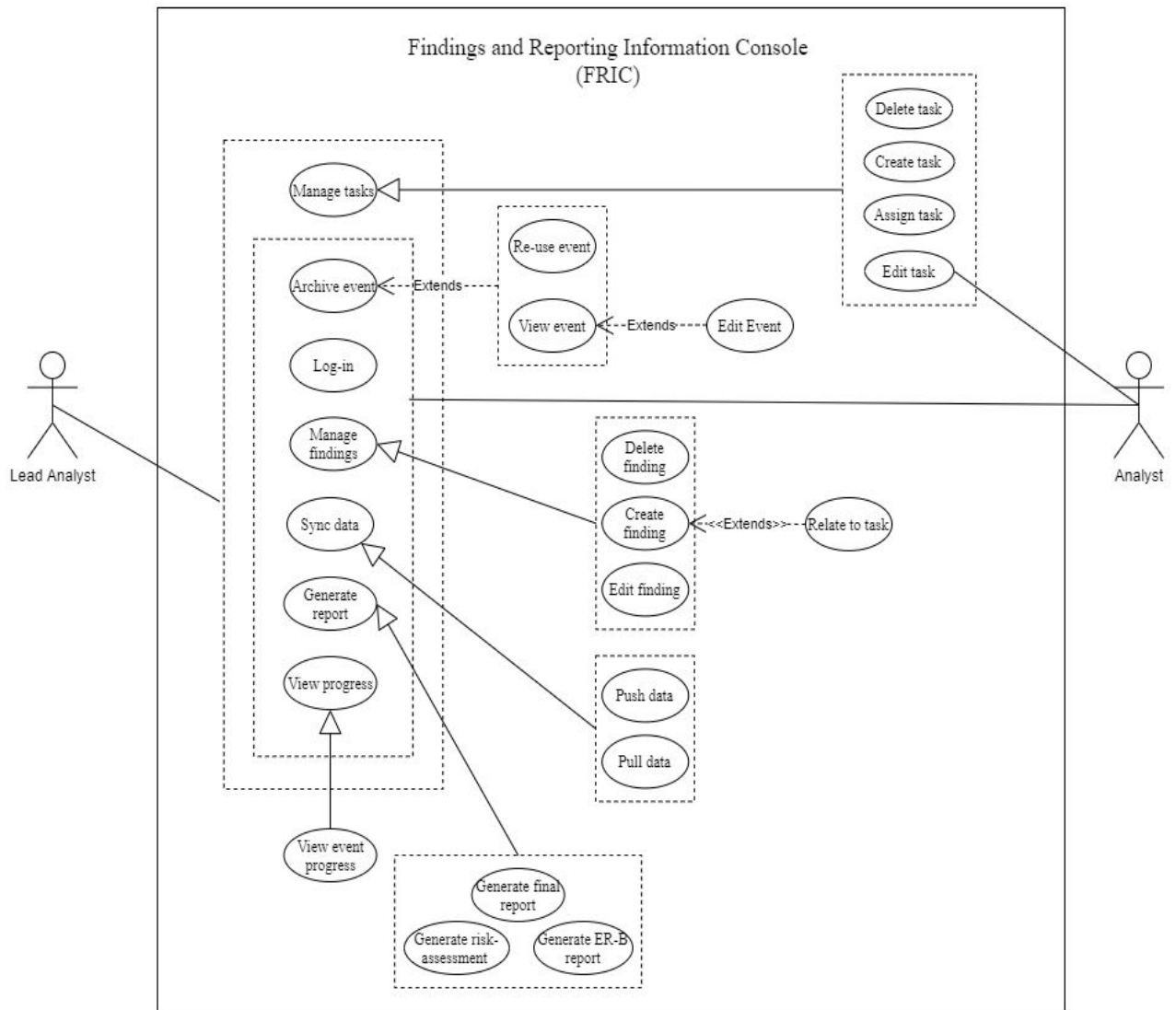
Flow of events:

- Step 1: Lead analyst selects option to view progress.
- Step 2: System displays list of current tasks and the analysts they have been assigned to.
- Step 3: Actor selects the analyst they wish to view.
- Step 4: System displays current progress of the task to lead analyst.
- Step : End of use case.

Use Case Level: Level 2

Version: 3.6

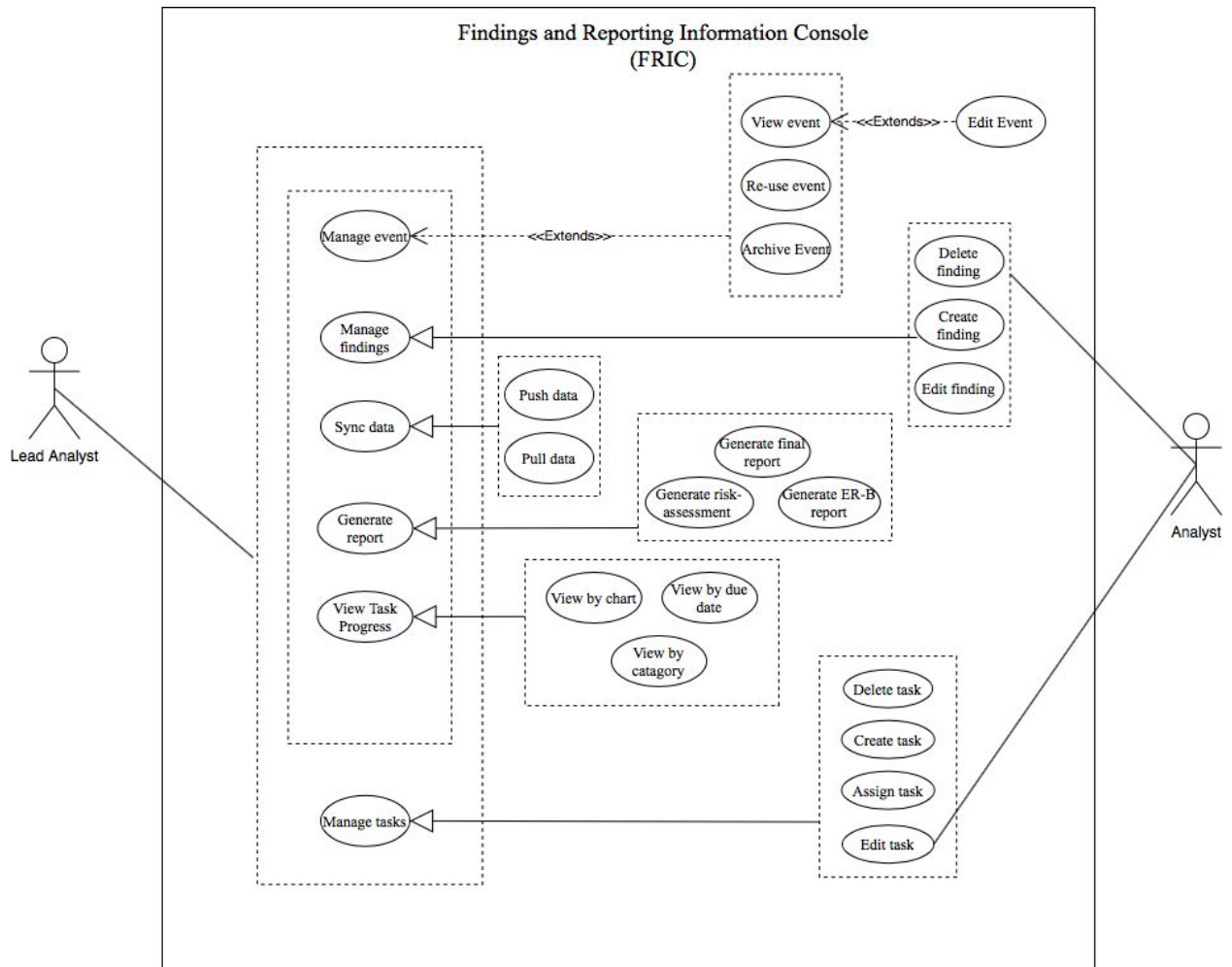
Use Case Model:



Use Case Level: Level 2

Version: 3.7

Use Case Model:



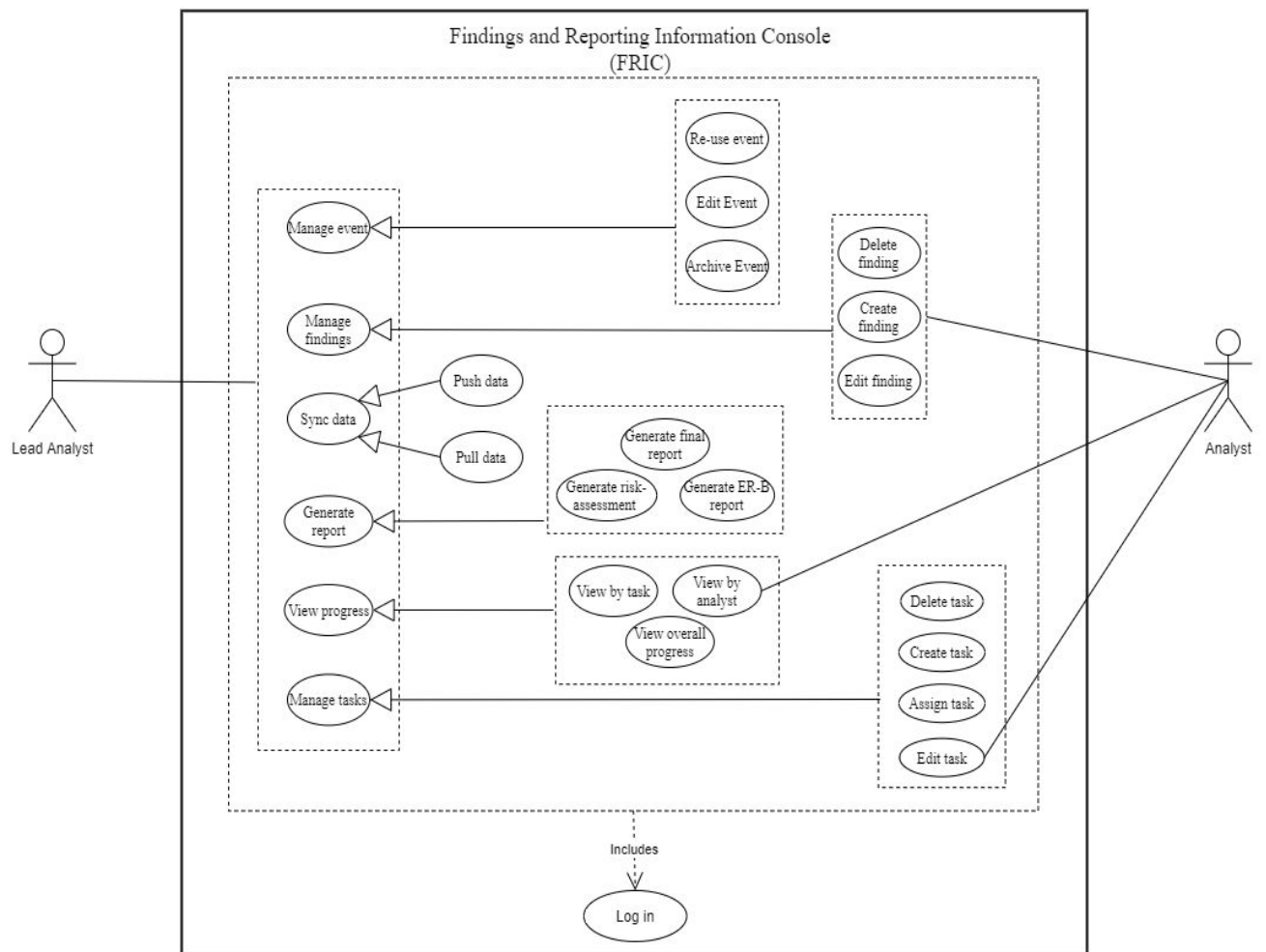


Fig 5: FRIC Level-2 Use Case diagram

Use Case Model Template

Use Case Level: Level 2

Version: 3.2

Use Case Model:

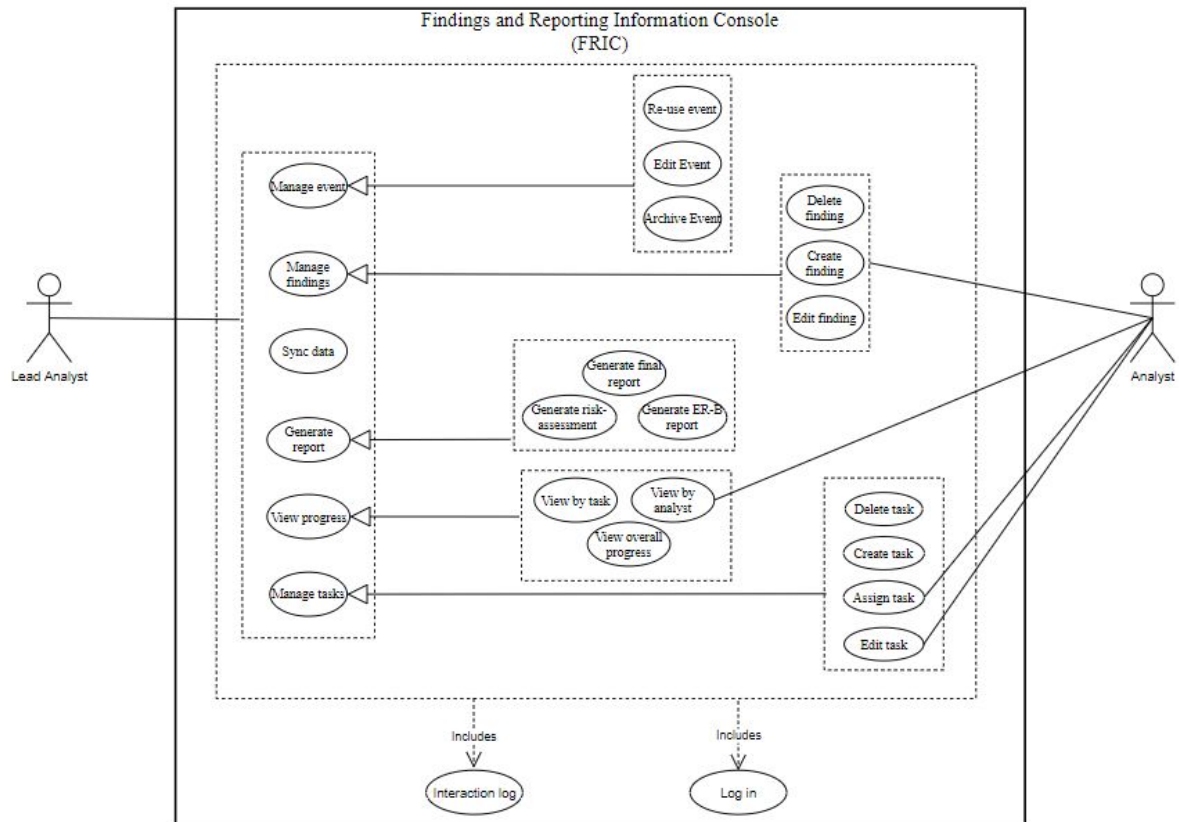


Fig 5: FRIC Level-2 Use Case diagram

Use Case Level: Level 2

Version: 3.8

Use Case Model:

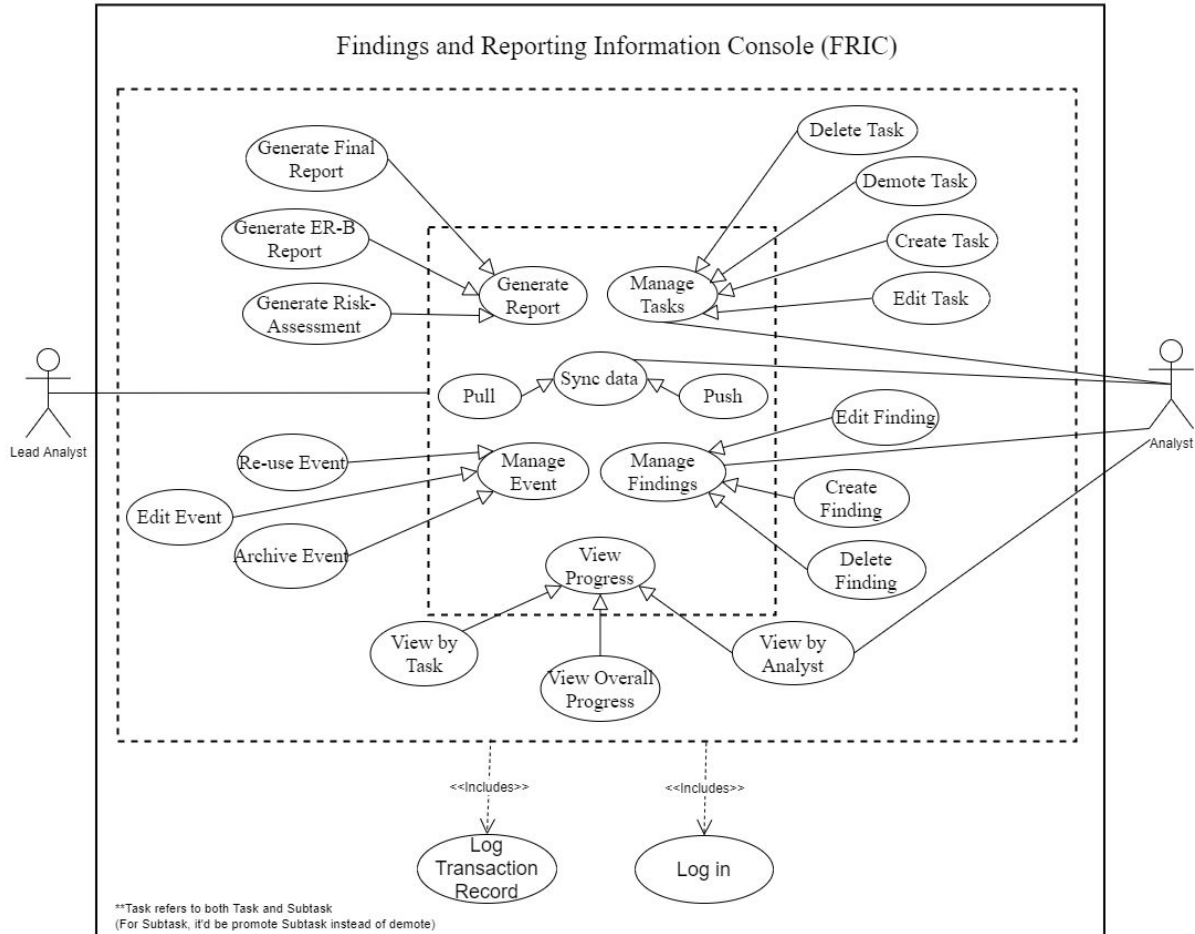


Fig 4: FRIC Level-2 Use Case diagram