Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge System (PICK)

Software Configuration Management Plan

Version <0.2>

2/6/2020

Document Control

Approval

The Guidance Team and the customer shall approve this document.

Document Change Control

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Distribution List

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Change Summary

The following table details changes made between versions of this document

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| --- | --- | --- | --- |
| Version | Date | Modifier | Description |
| 0.1 | 2/5/2020 | Abel Rodriguez | Create SCM draft document |
| 0.2 | 2/6/2020 | Abel Rodriguez | Finalize what I can and document the critical error of trying to create this on my own |
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# Introduction

The purpose of the software configuration management is to plan out how to configure and control the process of developing the PICK system throughout the semester and document the different phases/stages the system goes through in order to stay on track in being developed to meet all the client’s requirements. The project that our team will be working on for the entire semester is the PICK project given to us by the Lethality, Survivability, and HSI Directorate (LSH). The project consists of creating and adding more functionalities and/or features to Splunk that will help aid the LSH create vectors and reports that represent the events that took place during an adversarial assessment from the numerous log files contained within the red’s, blue’s, and white’s folder that will be filtered and correlated by LSH. This document contains a detailed explanation of how team 5 will develop the PICK system through three techniques that have been documented on this SCM. The first technique that will be applied is Software Configuration Identification in which we identify everything that is necessary and required for our system to be complete and functional as we progress through its development. The second technique that our team will implement is the Software Configuration Control in which we will identify priorities during the beginning of each new version of the system that involve when to make changes, add more features, fix defects, and how to divide the work amongst our team. The third and last technique that is our team will implement is Software Configuration Auditing in which our team must verify each other’s work to determine if we are creating the right system as specified in the SRS and to detect any necessary changes that must be addressed in order for the system to function as expected by the clients.

## References

03SCM\_Assignment.pdf was used as a basis to include information pertaining to the questions found in this pdf file in order to mention key items within the SCM. Another file that we used as reference was 03SCM.pdf which assisted the team in understanding what the four techniques/methods of a SCM and how to go about developing a system with a sensible approach.

# Software Configuration Identification

<< This section provides labels for the baselines and their updates.

>>

## Software Configuration Item Identification

<< Identify a complete list of elements that will make up a configuration. A “configuration” is the set of things you need to create and install a working version of your system. These items include source code, design documents, test suites, requirements documents, project plans, project standards, and other documentation such as user guides. It may also include specific versions of COTS products needed to build and run the system. Identify only the items that are to be controlled in a given configuration. >>

* Requires a team meeting to create and group a detailed configuration item identification.
  + Group of all configuration item identification or just a blueprint that will be used for every configuration item identification as the project progresses? Or both
* Our team will also need to reference and analyze further the SRS to further assist what to identify and mention in each configuration
  + The SRS will be added to the references since that document will assist in identifying most of the key entities and relationships

## Software Configuration Item Organization

The labeling scheme our team will implement on the versions of our program will the usual v(base number).(0-5 completion status). The base number will symbolize which configuration or version our team is currently working on. While the number on right of the period is the completion status of each member’s assigned part, which will symbolize our team members completion status on the divided work for the configuration. Zero means no member has finished their part while 5, the highest number, indicates all members have completed their parts. Once the version has reach completion status 5, finalization is in the works to integrate all our pieces together to create the next version of the project and assign each member new parts to work on.

Project database will be stored in the software 2’s GitHub repository. Our team member’s will be working on system on their personal laptop and uploading their progress to their assigned branch on GitHub. Once a team member’s part/task is completed, they will commit and push their work to the master branch. The plan of action for every team member in backing up their work is to commit and push all their changes and progress to their branch on the software 2’s GitHub repository whenever they close their computer. We will use GitHub when needed to recovery any files that were committed and pushed within the history if needed.

* The naming conventions will be determined and discussed during the mandatory team meeting
* Issue handling and division of tasks will be determined and created during our next mandatory team meeting.

# Software Configuration Control

* This entire section must be addressed during the mandatory team meeting since this is beyond my capabilities to be done on my own due to the fact this is a team consensus effort.
* Had we done this sooner, we would have had a better understanding of how and when to go about changing the project in a reasonable and manageable way which would have negated this outcome of not having a real rough draft for SCM.

<< Provide a detailed mechanism for preparing, evaluating, and approving or disapproving all change proposals to the configuration items throughout the life cycle. The purpose of this section is to identify what mechanisms will be used to control access to items in the configuration in order to prevent unauthorized updates and collisions between team members working on the system simultaneously. >>

## Documentation

<< Provide documentation for formally precipitating and defining a proposed change to a software system.

Explain how you will document changes to the configuration. What style will be used? NOTE: In a large software project, this section would include a series of forms or procedures for submitting a change request to a committee for review. A change request form usually contains information related to who is requesting the change, expected start and delivery dates, a description of the change, priority level, business justification for the change and a section to be completed by the development team where an initial assessment is provided on what the impact of the change will be in the system, level of effort needed to complete the change, approval signatures and actual start and delivery dates. This type of documentation assists project managers to maintain and evaluate metrics related to the progress of the project. >>

## Configuration Control Board

<< Provide an organizational body (Configuration Control Board) for formally evaluating and approving or disapproving a proposed change to a software system. Explain who will have access to modifying different parts of the system. How will changes be approved or disapproved, i.e., what factors will be evaluated in order to approve or disapprove a change. Can anyone make changes to any other person’s components? Who will be in charge of distributing changes? NOTE: The Configuration Control Board in your software team is the software team. Describe how V & V will report errors in the code. Describe how changes are approved and distributed. A common approach is to have two people, e.g., the implementer and one other team member, approve a change. The changed artifacts are placed in a current working version directory with appropriate copies of previous artifacts saved.) >>

## Procedures

<< Provide procedures for controlling changes to a software system. Describe in detail the team guidelines for managing your configuration items. Explain what tools (such as SourceSafe or SCC) or policies will be used to document, approve, and make changes to the configuration. If no tools are used, then explain how it will be done manually. How will you document the version number(s) of these tools?

The procedures defined in this section must be consistent with the considerations and procedures defined in other sections of this document. Define who will be in charge of administering the database and making sure that the team follows the process detailed in this part of the plan. Determine in detail what steps each team member must follow in order to checkout and modify an item, what steps are needed to create a new baseline for the project and what approvals are needed from the configuration control board at each point in the process.

This section of the document must contain enough information to serve as a training mechanism of the above described procedures for new team members.

>>

# Software Configuration Auditing

<<Provide a mechanism for determining the degree to which a configuration of the software system mirrors the intended software system. This section describes the process your organization will use to ensure that a delivered version contains the updates intended. Section 3 described the process for identifying and propagating changes to a base line. This section describes the process for determining the compliance with the process in Section 3. >>

* This is also going to be discussed and determined within the mandatory team meeting.