

Section: PUBP-6727

## Mutual Monitoring in the Cloud Evaluation Plan

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### Summary

The project, as [detailed in the initial proposal](#), examines the many challenges to effective multi-party security monitoring of cloud service providers with a solution resulting from two areas of work. The first area of work is an analysis of best-in-class contemporary techniques for multi-party cloud security monitoring, typified by FedRAMP's administration of their [Continuous Monitoring Program](#). The second area of work, informed by the first, is a specification and prototype for a novel architecture for multi-party security monitoring of cloud service providers, addressing challenges and shortcomings identified from the first work area.

To evaluate the solution, I plan to use a multi-disciplinary approach to assess the project's final deliverables, identifying benefits to the proposed solutions; confirm and discover limitations to the solution; and propose future areas of work. I categorize this multi-disciplinary approach into qualitative and quantitative methods, which I describe in more detail below.

### Quantitative Methods

Evaluating this project will include the quantitative methods below.

- Model the range of costs for continuous monitoring process, data access, and submission for FedRAMP's current requirements.
- Model the range of duration for processes related to continuous monitoring activities for FedRAMP's current requirements.
- Model and estimate the equivalent processes in the proposed mutual monitoring architecture.

- Review findings with subject-matter experts of various FedRAMP stakeholder backgrounds, comparing and contrasting to their experiences.

## **Qualitative Methods**

Evaluating this project will include the qualitative methods below.

- Identify challenges and obstacles to current FedRAMP continuous monitoring processes through resources including, but not limited to:
  - literature review of multi-party security monitoring of cloud service providers, as FedRAMP and other regulatory frameworks implement it;
  - sentiment analysis FedRAMP's official forum for its 20x modernization program, in which stakeholders often critique current processes.
- Identify features and use cases of the mutual monitoring architecture to address identified challenges with a qualitative analysis of their positive or negative impact.
- Interview FedRAMP stakeholders in government and industry, presenting the mutual monitoring solution, so they can provide feedback and qualitatively score the solution given their subject-matter expertise and experience with FedRAMP continuous monitoring.