I. Introduction
   A. Problem Statement
   B. Solution Statement
      1. Methodology
         a. Architecture specification
         b. Qualitative analysis of gaps in current FedRAMP monitoring processes
         c. Quantitative analysis
            i. Duration and cost for continuous monitoring operations
            ii. Duration and cost for transparency service architecture for mutual monitoring
               - Estimates for development from parallel use cases
                  - certificate transparency
                  - binary transparency
                  - supply chain transparency services
               - Estimates for operation from parallel use cases
                  - certificate transparency
                  - binary transparency
                  - supply chain transparency services
      2. Key components and deliverables
II. Continuous Monitoring for Cloud Services
   A. NIST Risk Management Framework (SP 800-37; SP 800-53)
   B. Cloud Security Alliance CAIQ/STAR
   C. CIS Controls Assessment Specification
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   E. SOC 2
III. FedRAMP Continuous Monitoring
   A. Background
   B. History
   C. 20x Working Programs and Modernization
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      1. Infrastructure CSPs support dependent CSPs and agency customer application reporting
      2. Accurately deriving summarized statistics verifiably from raw data
      3. Challenges and limitations of OSCAL and other existing data standards
      4. Effective use of signatures, verifications, and trust indicators
      5. Timely report submission and repeatable report verification
      6. Challenges to current scanning techniques for compliance and vulnerability scanning
      7. Inventory approaches and challenges
      8. Challenges to the current Significant Change Request process and future modernization
      9. Privacy-enhancing and least privilege access to cloud security data
      10. Challenges due to current third-party auditors’ staff knowledge and skills
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   D. Processes