

A Scalable Architecture for Digital Public Service Platforms

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Abstract

This demo article proposes a scalable architecture for digital public service platforms that must support diverse agencies, fluctuating demand, and strict accountability requirements. The design combines domain-oriented services, asynchronous integration, shared identity controls, and an event-based audit trail. Evaluation is performed through fictional service journeys and synthetic load profiles covering application intake, document verification, payment confirmation, and status notification. The simulated results indicate that independent scaling and queue-based processing can reduce cascading failures while preserving a consistent citizen-facing experience. However, technical scalability alone is insufficient; common data definitions, service ownership, accessibility standards, and incident procedures remain essential. The paper outlines a staged adoption model that allows legacy systems to coexist with new platform capabilities. Security boundaries and privacy-aware logging are included throughout the design. All agencies, workloads, metrics, and outcomes described here are fictional and were created only as demo content for interface, retrieval, and publishing workflow tests in OJS.

Keywords: digital government, scalable architecture, public services

DEMO CONTENT NOTICE

All names, data, cases, measurements, and findings in this file are fictional.

1. Introduction

This demonstration paper frames the problem addressed by "A Scalable Architecture for Digital Public Service Platforms" within a realistic but entirely fictional institutional setting. The scenario is designed to exercise scholarly metadata, full-text presentation, and information retrieval without making a claim about real participants, organizations, or measured outcomes.

The demo context intentionally includes searchable terminology related to the article title and keywords. This allows the native OJS search index and the publisher theme to be validated with plausible academic prose.

2. Method

The method uses a synthetic case, invented observations, and a structured comparison of baseline and proposed workflows. Requirements, evaluation criteria, and limitations are documented before the simulated analysis. No external dataset, copyrighted article, or real personal information is used.

The assessment is descriptive. It checks completeness, consistency, traceability, and the clarity of information presented to a fictional user. Values shown in the scenario are illustrative and are not generalizable.

3. Results and Discussion

The fictional evaluation indicates that a clearly defined workflow, consistent metadata, and observable quality checks can improve traceability and user understanding. The result should be interpreted as a design illustration rather than empirical evidence. A production implementation would require ethics review, representative data, security assessment, accessibility testing, and independent validation.

4. Conclusion

The demonstration illustrates how the proposed topic can be communicated through a conventional scholarly structure. Its only purpose is to populate and test the JOCSR OJS installation. It must not be cited or represented as a real scientific publication.

References

- [1] JOCSR Demo Editorial Team. 2026. Guidelines for Fictional System-Test Content. Internal demo document.
- [2] JOCSR Demo Lab. 2026. Synthetic Methods for Interface Validation. Fictional technical note.
- [3] No external or copyrighted research article was used to produce this PDF.