



Enterprise Design Patterns: Mobile Architecture

What are Enterprise Design Patterns?

Reusable templates that guide the enterprise to implement a set of technologies in standard ways

How do Enterprise Design Patterns relate to the Enterprise?

Enterprise Design Patterns translate OI&T's strategic goals, as documented in the Enterprise Technology Strategic Plan (ETSP), into "real world" direction to guide system design

How can I learn more?

To learn more about Mobile Enterprise Design Patterns, contact Nick Bogden
(Nicholas.bogden@va.gov)

To read the full document, see the TS website:

www.techstrategies.oit.va.gov

To ask questions about Enterprise Design Patterns in general, reach out to AskTS@va.gov

- **Enterprise Design Pattern Scope:** The concept of mobility is quickly growing as an enterprise discipline within large organizations including VA. Mobility involves the collective set of people, processes, and technology associated with the increased availability of mobile devices, wireless networks, and information access services applicable to mobile computing within a business environment. The Department of Veterans Affairs (VA) has mobile computing platforms established, however the architecture is currently not extendible throughout the enterprise and limited in supplying the robust capabilities required to support the level of service Veterans and VA staff expect..

This Enterprise Design Pattern document provides an enterprise-level view of the "To-Be" mobile architecture environment within the VA IT infrastructure. It describes the vision for utilizing agreed upon common re-usable capabilities, as validated by VA LOBs, to provide seamless mobile access to VA ESS through the VAMF and eMI. The document will focus on a vendor-agnostic framework for an enterprise mobile architecture environment, and will refer to, rather than duplicate, lower-level solution guidance associated with these capabilities. This Enterprise Design Pattern document does not address detailed technical solution architecture guidance for implementing specific mobile frameworks and tools. It will only provide the constraints to drive VA mobile programs towards development of solutions that effectively meet the specific goals of their initiatives.

- **Current State:** All mobile applications are depolyed within the VA Mobile Framework (VAMF) architecture and Mobile Application Environment (MAE). Limitations with the VAMF raise security and scalability issues. The VAMF allows the use of system accounts through Medical Domain Web Services (MDWS) violating National Institute of Standards and Technology (NIST) and Health Information Portability and Accountability Act (HIPAA) requirements.

Current state mobile apps use MDWS to perform queries against the VHA Corporate Data Warehouse (CDW) – a set of databases containing data replicated from Vista. OI&T has not identified an authoritative source for Veteran facing mobile apps to use to obtain Veteran data. Both the repository and the interface layer must be specified for this access, since it is unclear whether CDW can handle the performance load of the online mobile transactions. Additional requirements necessitate the source data be updated more frequently than the CDW working database. The updates to the datasets are daily, weekly, and monthly. Depending on the requirements of the mobile app, the frequency of the updates is not satisfactory to the Veteran or to the VA staff trying to serve the Veteran.

- **Design Pattern Solution:** VA's future-state IT vision, as outlined in the Enterprise Technology Strategic Plan (ETSP), supports consistent implementation of mobile computing solutions throughout all lines of business (LOB). An architectural framework of required IT capabilities will make possible the seamless integration of enterprise resources deployed to devices not hardwired to VA's internal network. This integration provides both internal and external users an access point to common, device-independent services at any time and at any location in accordance with VA's IT vision. Enterprise mobile architecture must meet the following requirements:

- Accelerate mobile solution deployment by facilitating rapid decision-making using a repeatable process
- Facilitate the transition from a non-compliant mobile middleware solution to a scalable enterprise mobile platform
- Provide common access to data to improve business processes by reducing the time to retrieve information