

Platform-as-a-Service (PaaS) Enterprise Design Pattern

Executive Summary

Office of Technology Strategies (TS)



Scope

The Cloud Computing Platform-as-a-Service (PaaS) Enterprise Design Pattern (EDP) defines a framework for using PaaS solutions, and addresses the following: What requirements do we need to know before we acquire PaaS? What are the user needs that drive these requirements? What are the business requirements that drive PaaS decisions? How does VA automate control and manage its IaaS platforms and those it wants to acquire?

Business Need

PaaS provides the means for supporting and improving services while simultaneously managing costs, enabling innovation, reaching a wider Veteran community, and securely exchanging information among VA partners. PaaS removes risks of migrating from physical to virtual machines and facilitates DevOps. PaaS, in conjunction with other enterprise IT capabilities, supports establishing an ecosystem for standardized platforms, in accordance with VA's IT strategy. This is sometimes dubbed "Platform-as-an-Ecosystem" (PaaE). These standardized platforms enable agile development in response to rapidly changing business needs. An additional benefit is "better supports multi-party engineering", where different vendors building separate components that must ultimately interoperate have access to PaaS Integrated Development Environments (IDEs), mitigating integration risks.

Approach

This EDP defines a framework for using PaaS solutions and addresses the following: what do we need to know to evaluate options for a cloud approach? What are the customer needs that indicate PaaS may be appropriate? What are the business requirements that drive PaaS decisions? The PaaS approach consists of gathering business needs and defining requirements, determining the purpose of the platform, defining the attributes of a PaaS cloud architecture, and determining infrastructure required, among other steps.



The TS office within OI&T's ASD, interacts not only with the Enterprise Architecture pillar offices, but also

with multiple external vendors, stakeholders within OI&T, and with strategic offices across the enterprise. TS works closely with IT and business owners to capture business rules and provide technical guidance as it relates to Data Sharing across the enterprise, specifically for interagency operability.

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 about this Enterprise Design Pattern?

Please contact Nicholas Bogden (Nicholas.bogden@va.gov) to learn more

Where can you find a full list of published EDPs?

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