

## *Abstract*

A company, XYZ, has a need for Virtual Machines (VMs) on their physical servers as a Platform as a Service (PaaS) to support multiple applications simultaneously[1]. However, creating VMs presents new challenges, especially during the system design and implementation phases[2]. During the process, errors often occur when provisioning instances of a service, particularly when trying to apply a previously created service configuration to a different infrastructure with a large number of instances. This can affect efficiency in terms of both time and effort for engineers. Additionally, the current IT market is increasingly dominated by the "need for speed"[3]. To address these issues, XYZ has implemented Nutanix Calm as an automation tool for designing PaaS with the required services, specifically using Oracle WebLogic as the web server. With the blueprint feature, the design phase of each VM can be directly mapped to one another based on the interconnections between instances. Moreover, the created blueprint can be reused for other infrastructure environments with different specifications and numbers of instances. In terms of implementing PaaS for WebLogic, it significantly shortens the time required for configuring VM instances, where configuration can be done once for all instances in the blueprint using a script. Compared to the manual process, the time required to provision two WebLogic VM instances and one load balancer VM instance using this blueprint is much faster, taking only 6 minutes and 28 seconds, whereas the manual process takes 30 minutes and 46 seconds.

*Keywords: Virtual Machine, Platform as a Service, Nutanix Calm, instance, Oracle Weblogic, blueprint*

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