Modern Approach to Service Provisioning

Architectural Concept Paper

Traditional Approach to Provisioning:

In a traditional IT setup, a user would make a request for an IT resource such as a PC, laptop, phone connectivity or a server as well as associated software through an IT Service management Service Request ticket that would be then provisioned by an engineer based on service levels agreed.

A Modern Service Management approach to Provisioning:

With the proliferation of cloud-based platforms and with provisioning times reduced drastically, there is already a much-felt need and a big opportunity to automate provisioning of resources and where possible, associated software. Engineers could now focus on post provisioning activities such as tuning the provisioned resources to custom-fit some of the parameters to the user's specific requirements.

In this concept paper, I have described a modern way of provisioning a server resource via a Service Request straight through without any human intervention. This calls for a high level of automation, integration, automated decision making and authorization workflow requirements.

Most importantly, the automation and integration involve marrying up not only the technology tools via connectors or APIs but also integrating the various process frameworks and authorization models that underpin the technology.

Here, I have also described a use case of "Straight Through Processing" and tried to demonstrate the value generated by bringing together multiple paradigms / frameworks of ITSM, DevOps & Cloud.

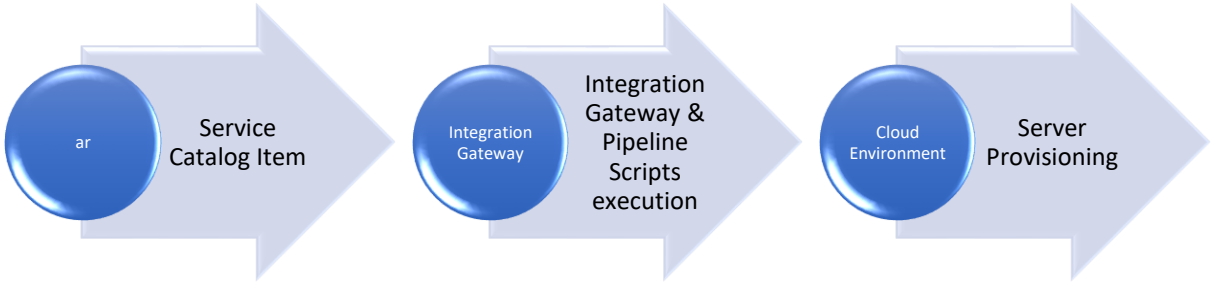

Fig.1 An Architectural model of the Automated provisioning methodology

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Details about the solution:

The intention of this architectural solution is to enable automated provisioning of a bare metal AWS EC2 server instance from a ServiceNow Catalog using an intermediate CI/CD engine such as Jenkins's integration & pipeline capability to integrate ServiceNow with AWS.

Other Use Cases:

Different Server / Operating System (OS) types - Provide a choice of multiple OS types within the AWS environment (Ubuntu OS, Microsoft, RedHat, SUSE etc..) and /or server of different specifications (t2.micro. t2.nano, t3.large. etc.)

Multi-Cloud Environment - Connect to hybrid / multiple cloud environments such as Microsoft Azure and Google Cloud to provision basic servers in those environments.

Multiple ITSM Platforms - Extend solution to allow ITSM products such as BMC Remedy, HP Service Manager etc.. to integrate with Jenkins to allow this integration.

References:

A detailed step-by-step guide on how to setup this automated provisioning environment in the link below -

https://github.com/Anandatreya/ServiceNow_Jenkins_AWS_Integration/blob/main/Step-by-Step%20Guide_V1.pdf

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