

The SFU logo consists of the letters 'SFU' in white, bold, sans-serif font, set against a solid red rectangular background.

SFU

SIMON FRASER UNIVERSITY
ENGAGING THE WORLD

The background of the slide is a photograph of a modern, multi-story building with a prominent corner structure. The building features a grid of concrete columns and beams, with large windows. The sky is a clear, bright blue. The text is overlaid on a solid red horizontal band that spans the width of the image.

Automation and Orchestration: The key to delivering agile infrastructure and application services

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Agenda

- Introduction
- Platform
- Tasks & Events
- Teams & Tickets
- Server Provisioning & Automation
- Service Catalog
- Lessons Learned
- Q&A

Introduction

- Automation
 - The delivery of a task or a function without human intervention.
- Orchestration
 - The coordination of automated tasks in such a way that the end result is a consolidated process.

Platform

- Automation
 - VMWare vRealize Automation
- Orchestration
 - VMWare vRealize Orchestrator
- Configuration Management Tools
 - Puppet
 - Ansible
 - PowerShell

Tasks & Events

Provisioning Tasks

- Preconfigured
 - Limited Scalability
- Dynamic
 - Greater flexibility
- Manual to Automated processes
 - Scripting
 - Actions
 - Workflows

Lifecycle Events

- Requested
 - Customization of Attributes
- Building
 - Validation and Sanity checks
- Provisioned
 - Join Directory Services, update DNS
- Disposing
 - Clean up

Teams & Tickets

- Application Services
 - Requirements and Specs
- Network Services
 - IP & DNS
 - Firewall
 - Alias
- Servers & Storage
 - OS
 - Active Directory
 - Monitoring Systems
 - Load Balancing
 - Mail lists & Communication

Server Provisioning &

- Portal
 - Multi-tenancy
 - Self-provisioning
 - Governance
 - Access to console
- Orchestration
 - Integration with various vendor plugins
 - Integration with SOAP
 - Code based blueprints
 - OOTB workflows for management and maintenance.

Service Catalog

Catalog Deployments Design Inbox Administration Infrastructure Containers Business Management

Catalog 12 items | On behalf of:

| Sort: Name (ascending)

 <p>Linux Custom Request - Prod</p> <p>Requests a catalog item using the default template for each OS.</p> <p>Business group ARM, 42 more</p> <p>Service SFU Server Provisioning</p> <p>REQUEST</p>	 <p>RedHat 7 - CI - BCC - PRD</p> <p>RedHat 7 Server. SFU Custom Request.</p> <p>Business group BCC</p> <p>Service BCC Services</p> <p>REQUEST</p>	 <p>RedHat 7 - CI - NS - PRD - SRY</p> <p>RedHat 7 Server. For Surrey Production. Requires manual entries.</p> <p>Business group NS</p> <p>Service NS Services</p> <p>REQUEST</p>	 <p>RedHat 7 - CI - SS - PRD - SRY</p> <p>RedHat 7 Server. For Surrey Production. Requires manual entries.</p> <p>Business group SS</p> <p>Service S&S Services</p> <p>REQUEST</p>
 <p>SFU Create Alias Record</p> <p>Creates a cname record for an existing A record entry.</p> <p>Business group ARM, 42 more</p> <p>Service SFU Server Provisioning</p> <p>REQUEST</p>	 <p>SFU Create VIP DNS Entry</p> <p>Requests the next available IP address from a given range.</p> <p>Business group ARM, 42 more</p> <p>Service SFU Server Provisioning</p> <p>REQUEST</p>	 <p>SFU Firewall Change Request</p> <p>Firewall Change Request.</p> <p>Business group ARM, 42 more</p> <p>Service SFU Server Provisioning</p> <p>REQUEST</p>	 <p>SFU Load Balancing Request</p> <p>Collects the required attributes to build a load balanced solution, including the:</p> <p>Business group ARM, 42 more</p> <p>Service SFU Server Provisioning</p> <p>REQUEST</p>
 <p>SFU Remove Alias Record</p> <p>Removes a CNAME record from DNS.</p> <p>Business group SS</p> <p>Service S&S Services</p> <p>REQUEST</p>	 <p>Windows 2012 - CI - BCC - PRD</p> <p>Windows 2012 Server. SFU Custom Request.</p> <p>Business group BCC</p> <p>Service BCC Services</p> <p>REQUEST</p>	 <p>Windows 2016 - CI - BCC - PRD</p> <p>Windows 2016 Server. SFU Custom Request.</p> <p>Business group BCC</p> <p>Service BCC Services</p> <p>REQUEST</p>	 <p>Windows Custom Request - Prod</p> <p>Requests a catalog item using the default template for each OS.</p> <p>Business group ARM, 42 more</p> <p>Service SFU Server Provisioning</p> <p>REQUEST</p>

Deployments

Deployments 397 items 

Search for deployments by name, description, IP address, resource name or machine status | Sort: **Created Date (descending)** 

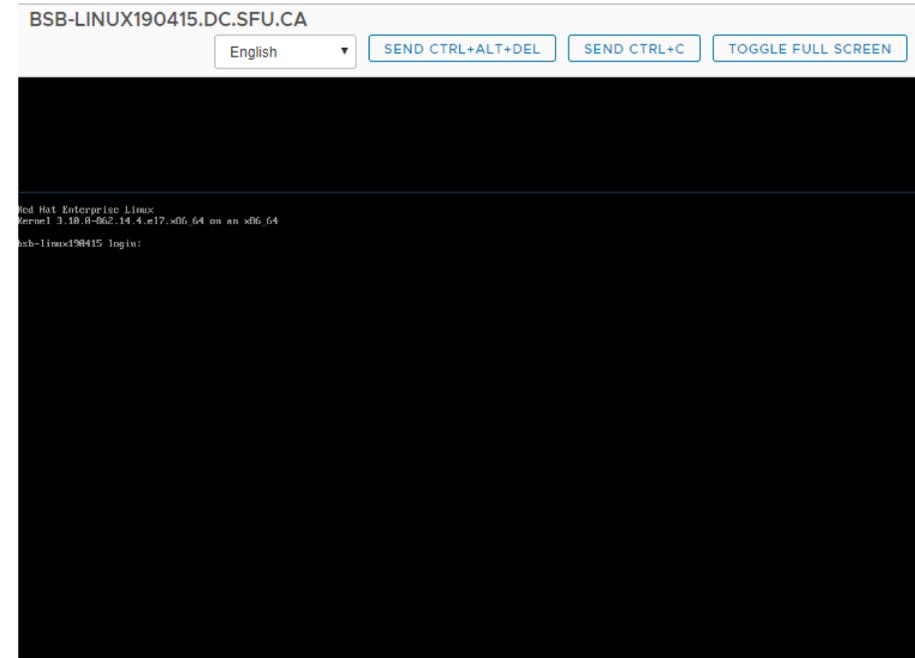
	RedHat 7 - CI - VPR - PR... SFU Custom request form Owner Benjamin Reid Business group VPR	1 Resource VPR-DB1.DC...	Expense (Mo... ▶ On	Created 1 da... 142.58.232.143	Never expires	ACTIONS ▼
	Linux Custom Request - ... Requests a catalog item using the de... Owner Benjamin Reid Business group VPR	#5637 - Workflow Execution Linux Custom Reque... - Successful 100% The request was successfully completed				ACTIONS ▼ 1 day since submitted
	RedHat 7 - CI - BSB - PR... SFU Custom request form Owner Kennedy Ko Business group BSB	1 Resource BSB-LINUX1...	Expense (Mo... ▶ On	Created 1 da... 142.58.232.142	Never expires	ACTIONS ▼
	Windows 2016 - CI - BSB... SFU Custom request form Owner Kennedy Ko Business group BSB	1 Resource BSB-WIN201...	Expense (Mo... ▶ On	Created 1 da... 142.58.232.137	Never expires	ACTIONS ▼
	RedHat 7 - CI - SS - PRD... SFU Custom request form Owner Hon Man Wong Business group SS	1 Resource WELCOMES...	Expense (Mo... ▶ On	Created 2 d... 10.28.3.116	Never expires	ACTIONS ▼

VM Details

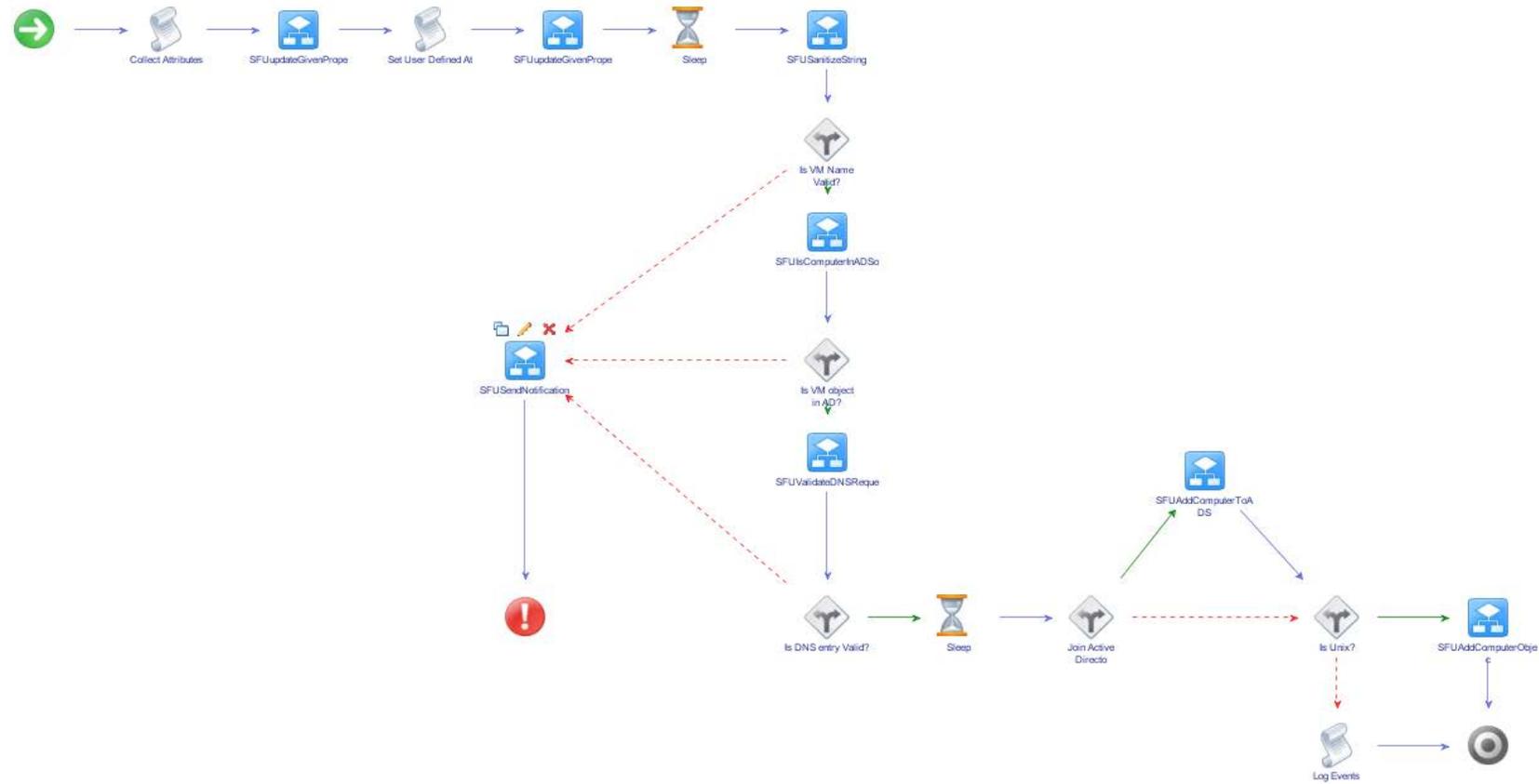
The screenshot displays a virtual machine management interface. On the left, a sidebar shows a tree view with 'RedHat 7 - CI - VPR - PRD - ...' expanded to 'VPR-DB1'. A context menu is open over 'VPR-DB1', listing actions such as 'Change Lease', 'Connect to Remote Console', 'Create Snapshot', and 'Power Off'. The main panel shows the 'General' tab for the VM 'VPR-DB1'. The details are as follows:

Property	Value
Name	VPR-DB1
Component	RedHat7ci509
Status	On
CPUs	1
Memory (MB)	2048
Storage (GB)	30
Description	RedHat7
Owner	
Blueprint	RedHat 7 - CI - VPR - PRD
Compute resource	compute-bby
Business group	VPR

Console Access



Workflows



Lessons Learned

- POC and its benefits
 - Proof of concept helps deliver the pros/cons for the proposed implementation
 - POC results in the ability to get executive support
- Executive support goes a long way to break silos.
 - Use the POC to get your executive team excited about the new technologies
- Collect requirements from the server Provisioning team.
 - Start by finding which of the low hanging fruit items can make the biggest impact on the team's day-to-day life.
- 80/20 rule for automation
 - There is always a percentage of special cases, leave those for last.

Q&A

