knowledge17

http://clabs.link/lab131989

WORK at LIGHTSPEED

Cloud Agnostic Blueprinting

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servicenow

Agenda

- Overview of CMP components
- Blueprint Basics
- Labs
  - Create a cloud agnostic blueprint
  - Create a catalog item
  - Order the catalog item
  - Invoke lifecycle operation on the stack

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Speaker Introduction



Name: Ashok Madhavan

Title: Director, ITOM BU

Function: Development

Company: ServiceNow

Experience: 20 years in product development

Expertise: Cloud, DevOps, Enterprise Software, ITIL

Achievements: Designing the way to manage hybrid cloud in ServiceNow. Most promising vendor (ITapp) in the CMP space by Gartner, 2014. Won the Gold Award for Cloud in VMWorld 2010.

Current Projects: Driving CMP in ServiceNow.

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Speaker Introduction



Name: Quentin Carton

Title: Sr. Advisory Solution Architect

Function: Customer Success

Company: ServiceNow

Experience: Started his career as System Engineer in Investment Banking industry, then spent the last 10 years helping customers with Cloud and Automation solution.

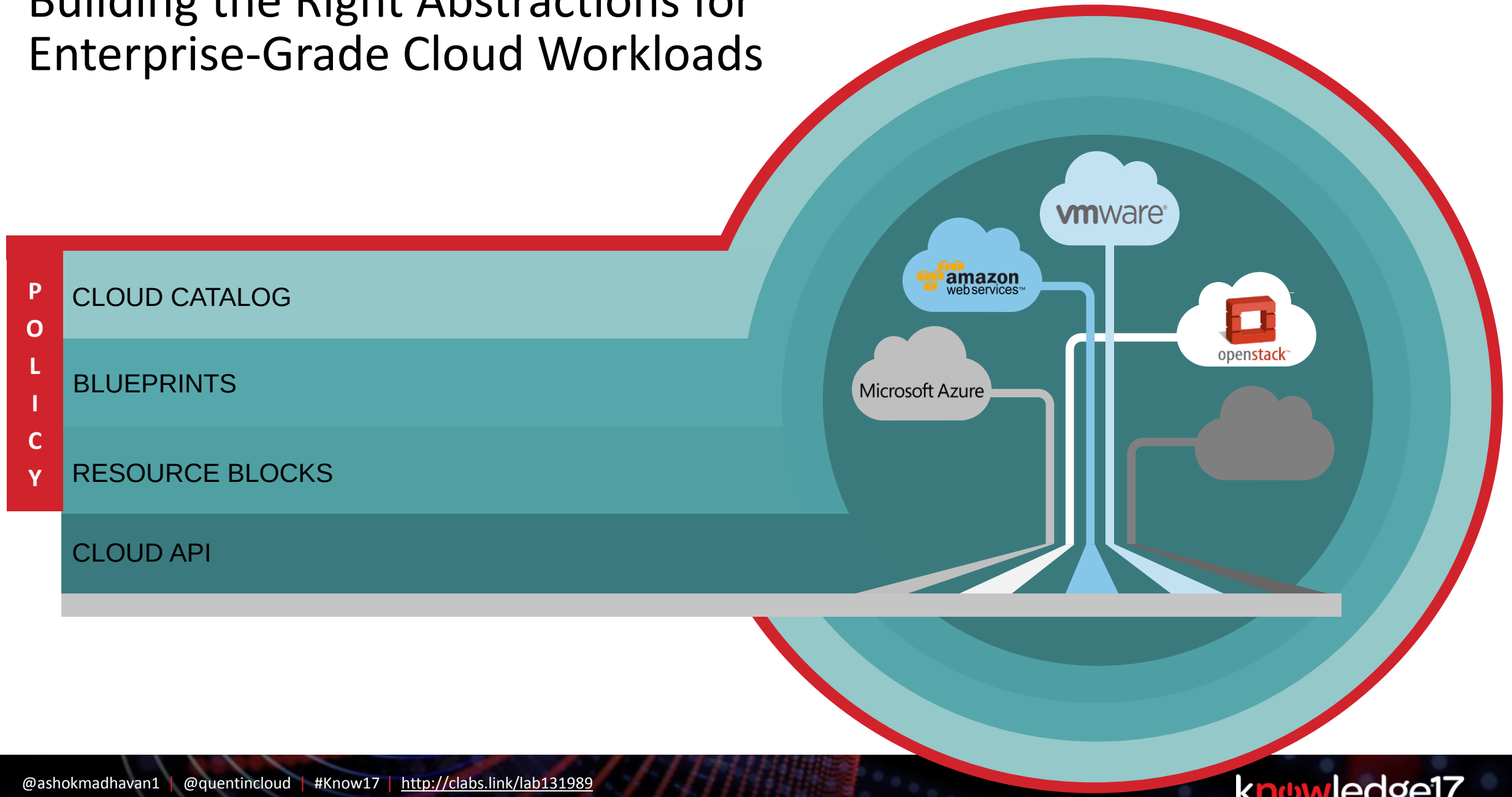
Expertise: DevOps, Orchestration, Cloud Management Platform

Achievements: Successfully implemented and delivered private clouds for various customers. Delivered automation and orchestration project, reducing time to deploy from a few weeks to a few minutes.

Current Projects: Helping customers understand and get the most value out of ITOM portfolios.

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Building the Right Abstractions for Enterprise-Grade Cloud Workloads



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Objectives and What You Will Learn

Objectives

- Learn blueprinting basics
- Create and deploy a cloud agnostic blueprint
- Invoke lifecycle operations on a stack

What you will learn

- Understand the basics of blueprinting
- Learn how to create cloud agnostic blueprints
- Learn how to create catalog items

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CMP Component – Cloud API

- Connector to any cloud
- Polyglot, supports any scripting language
- Execution is in MID server
- Cloud API is interface-based and implements a set of methods as defined by the interface
- CMP has a library of cloud APIs out of the box
- Field extendable

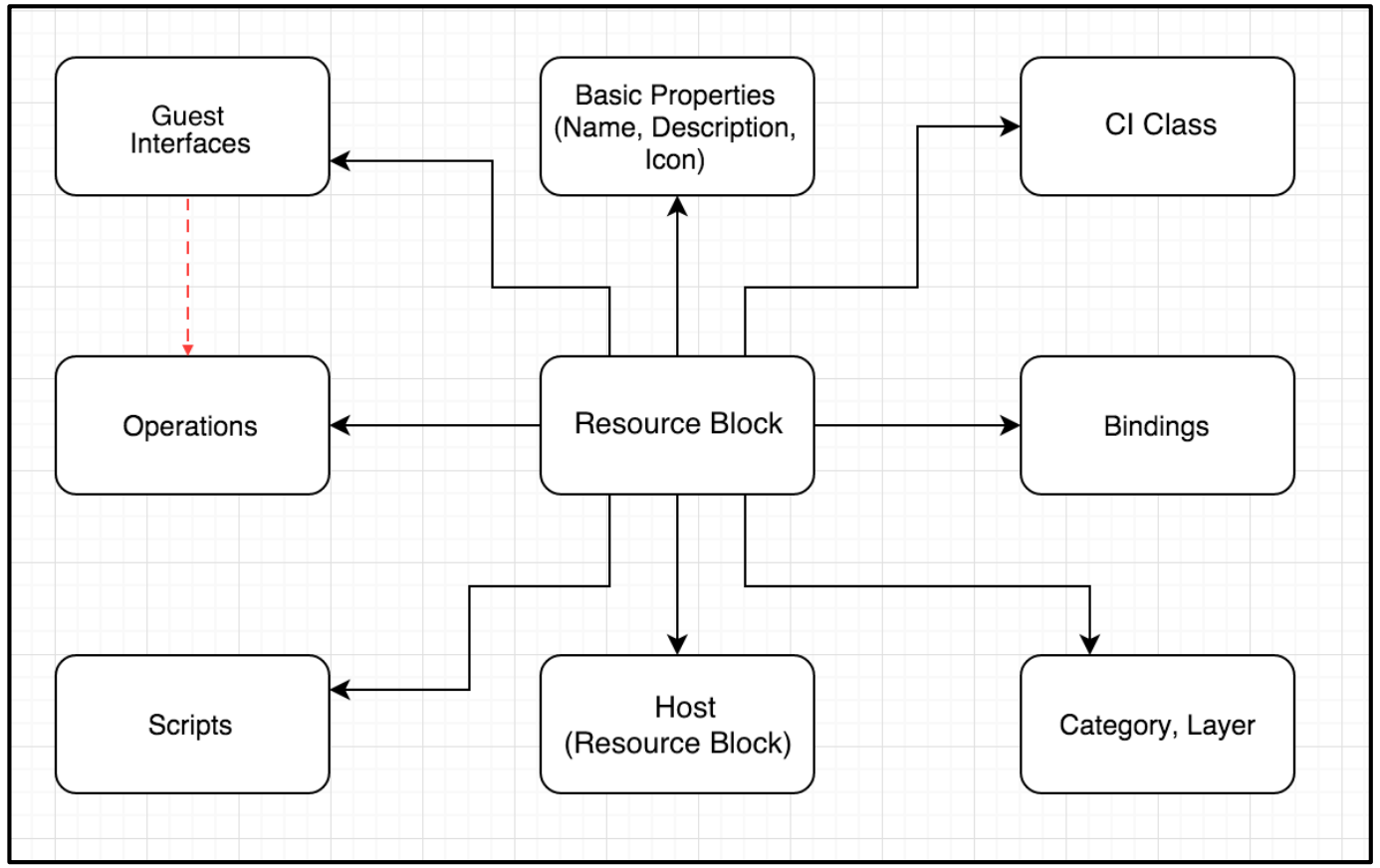
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CMP Component – Resource Block

- Building Block for any workload
- Can be abstract or specific
- Defined for a CMDB CI class; provides a way to create/manage the real resource which the CI represents
- It is interface-based and implements a set of operations as defined by the interface
- Can be deployed on any host resource
- Can directly call Cloud API or can delegate to the host resource
- CMP has a library of cloud resource blocks out of the box
- Field extendable

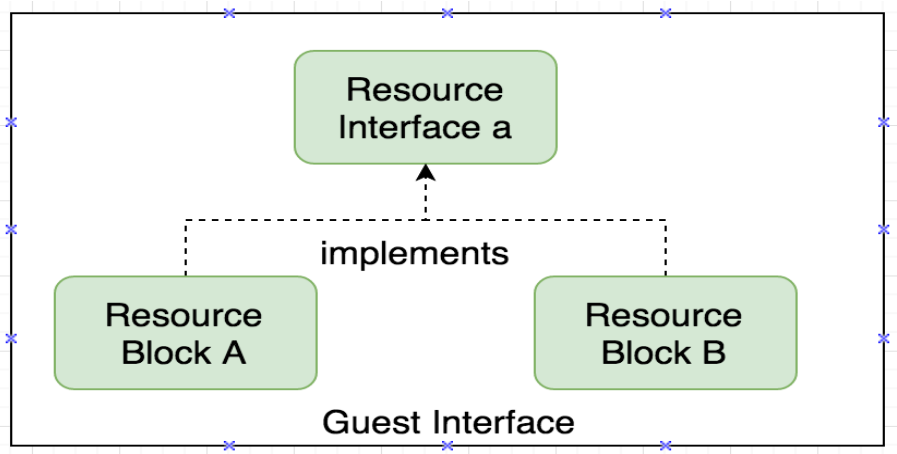
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Resource Block – Basics



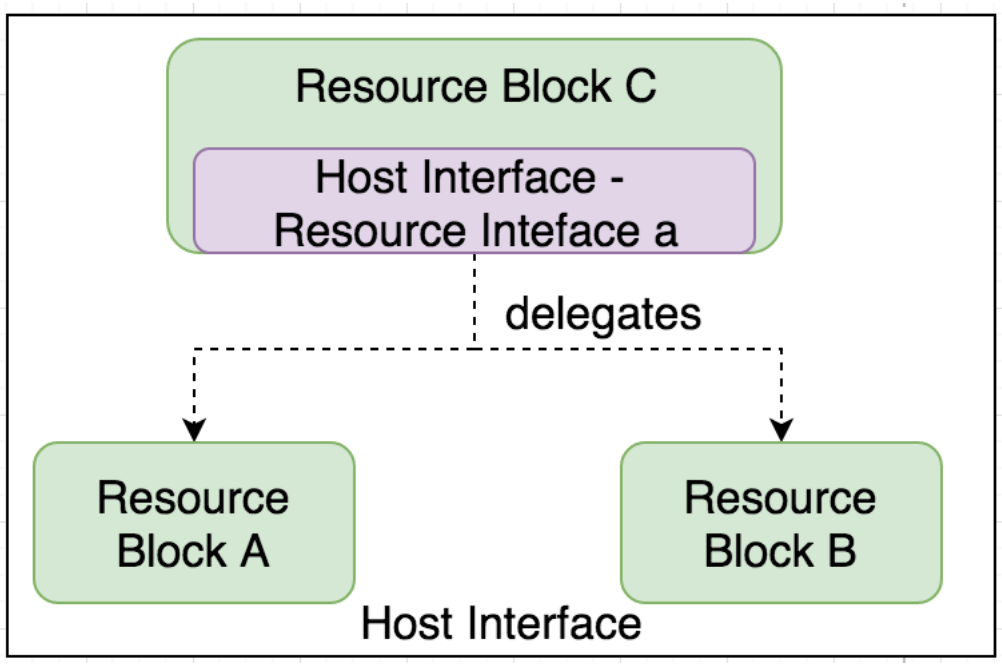
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Resource Block – Guest Interfaces



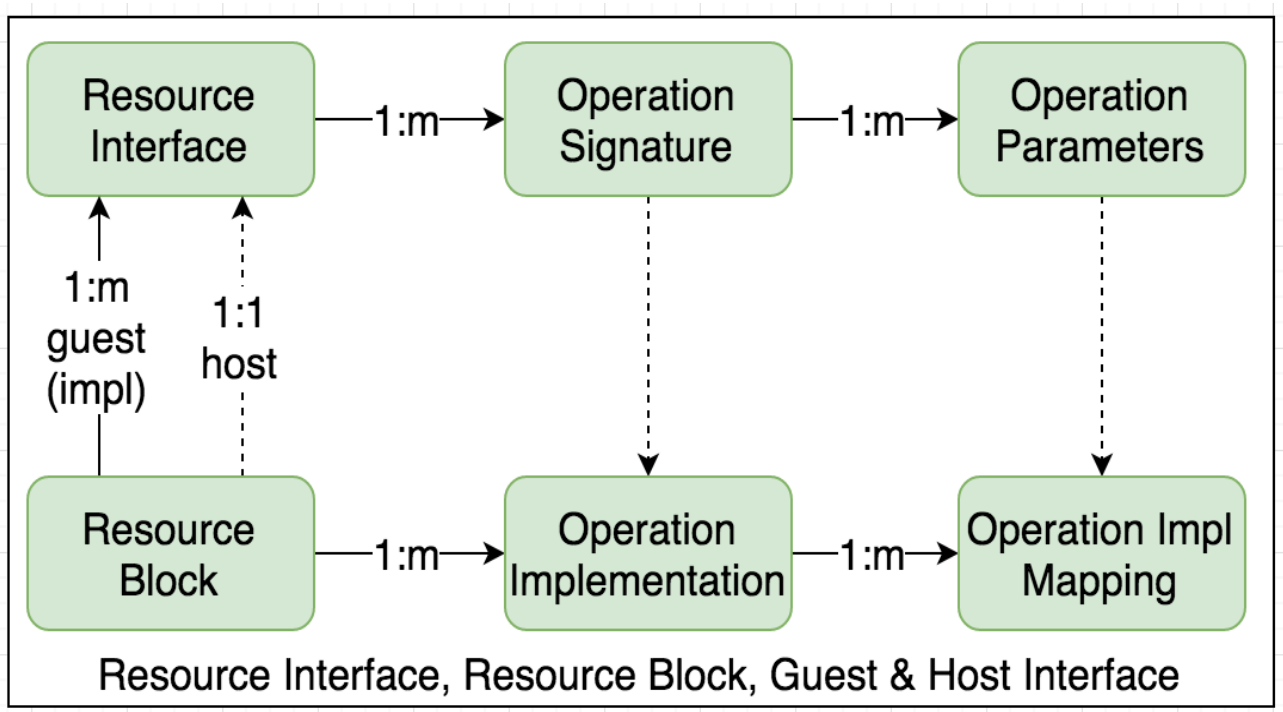
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Resource Block – Host Interface



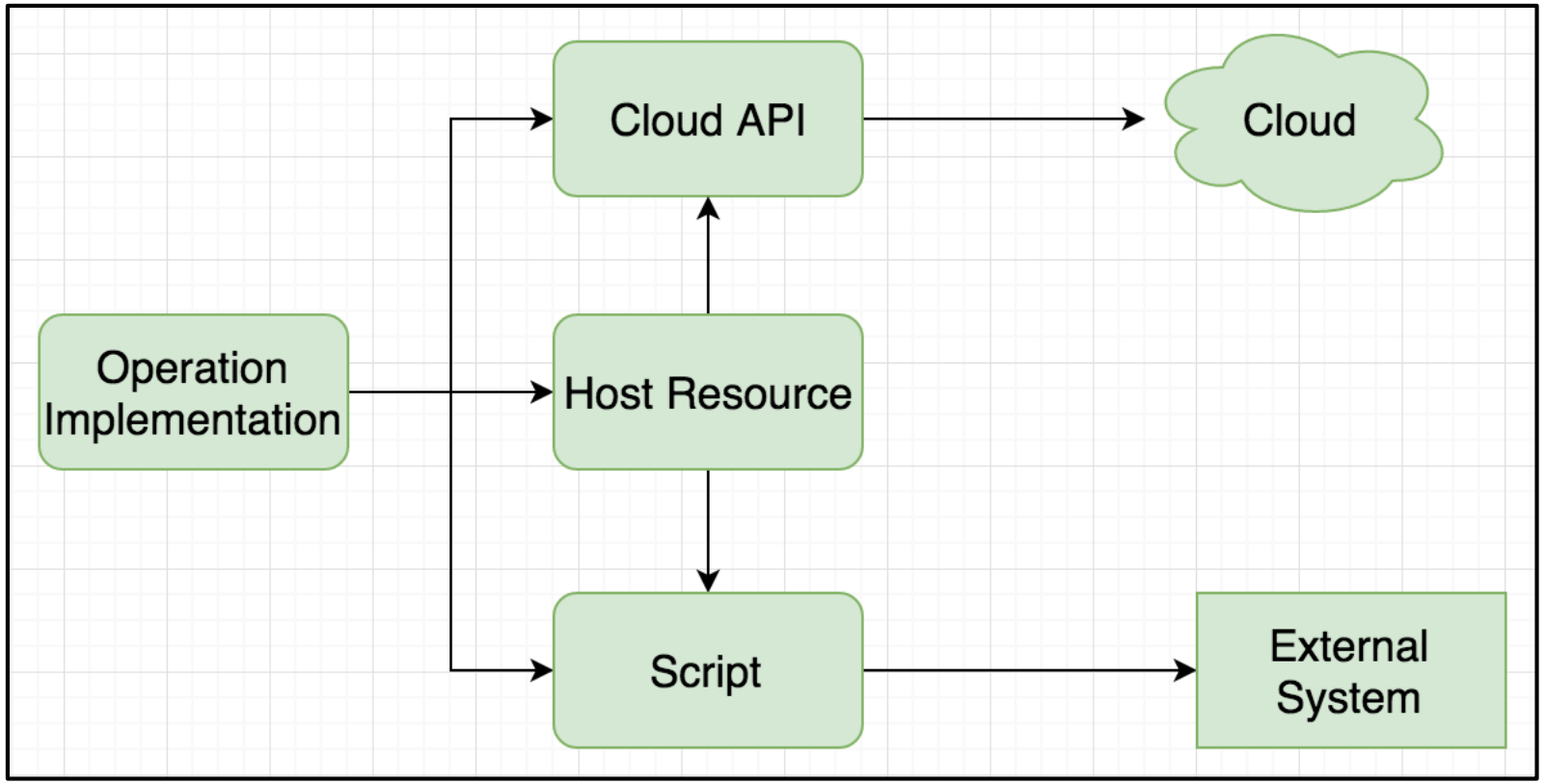
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Resource Block



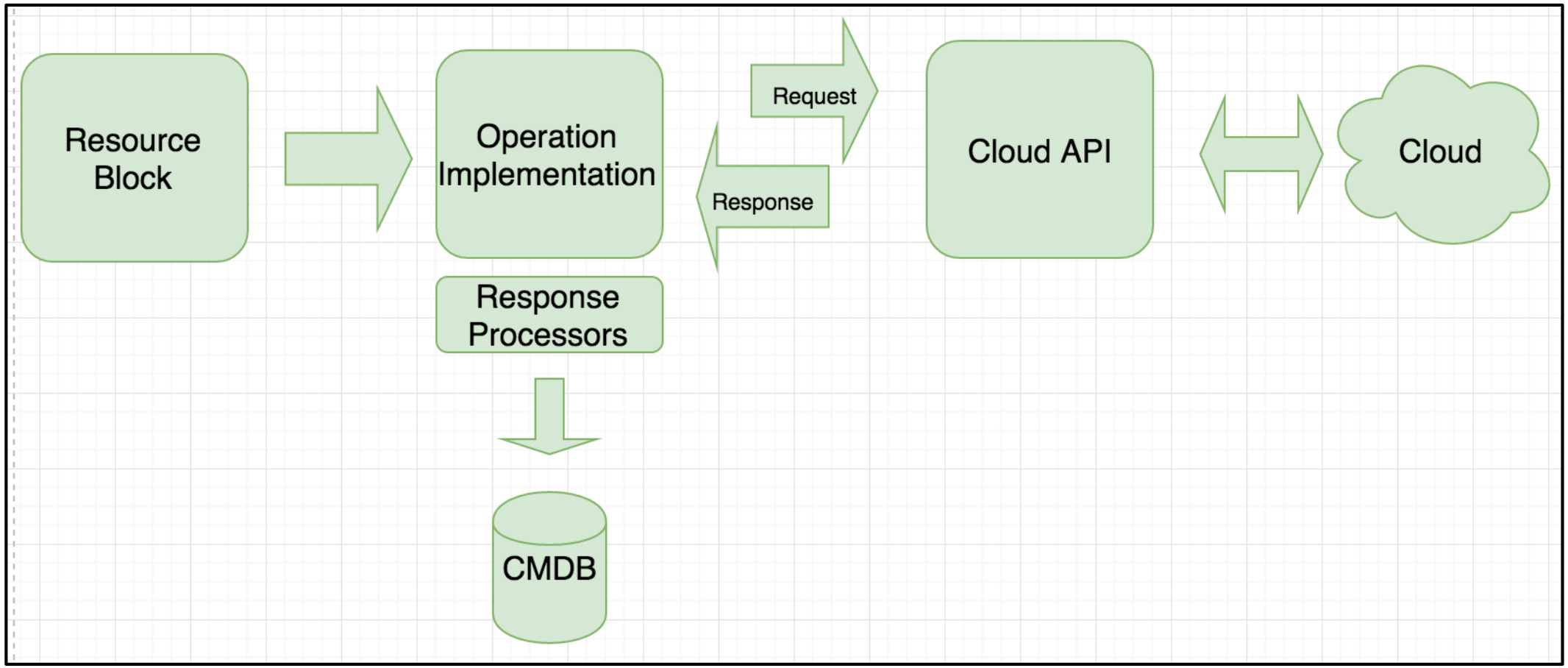
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Resource Block – Operation Implementation



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Resource Block – Cloud API Integration



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CMP Component – Blueprint

- Blueprint = Cloud Template + Operations + Forms
- Cloud Template
  - Defines the intent of the deployment
  - Deployment model contains the resources and the relations between them
- Blueprint has operations and forms
  - Hand-creatable/editable

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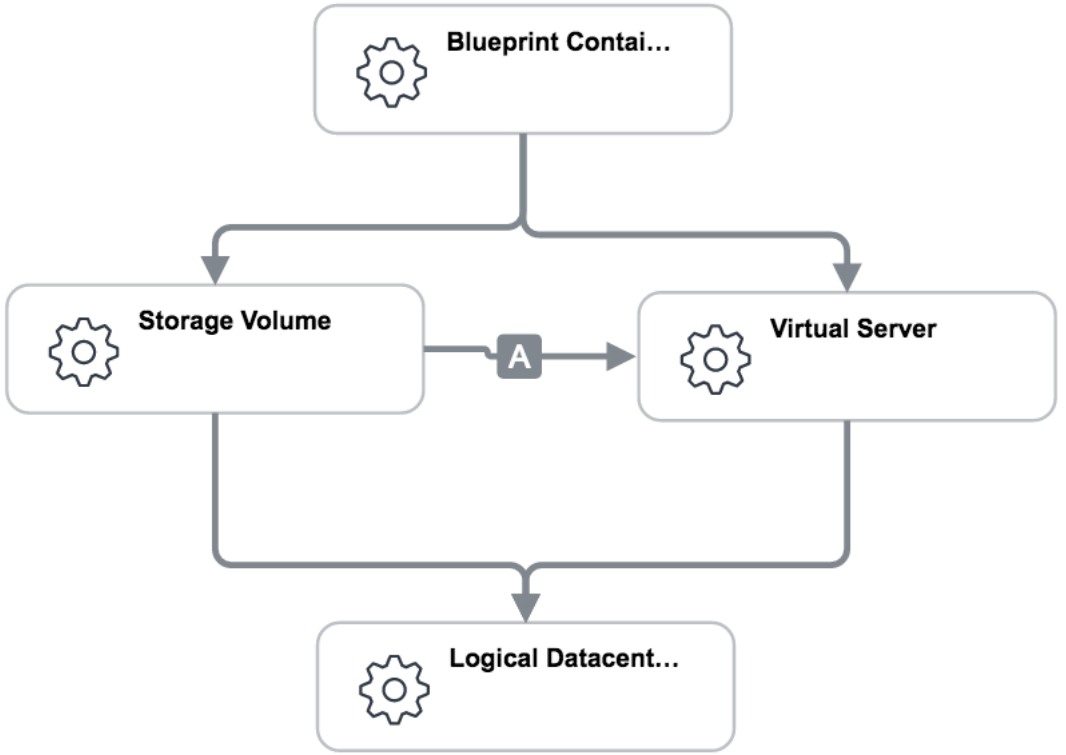
CMP Component – Blueprint

- Represents a workload
- It is built using resource blocks
- Has provision and lifecycle operations
- Blueprint can be defined on a specific cloud or can be agnostic
- Blueprints can be created via:
  - Graphical UI
  - Cloud template described in YAML format
- Each blueprint by default has Provision, Stop, Start, and Deprovision as operations on it

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CMP Cloud Template

```
ServiceNowCloudBlueprint:
  name: Multi cloud VM with volume
  category: Compute
  deploymentModel:
    resources:
    - resource: Virtual Server
      resourceblock: ServiceNow::Virtual Server
      host: Logical Datacenter
    - resource: Storage Volume
      resourceblock: ServiceNow::Storage Volume
      host: Logical Datacenter
      binding:
      - resource: Virtual Server
        endpoint: Block EP
    - resource: Logical Datacenter
      resourceblock: ServiceNow::Resource::HostConstraints::Logical Datacenter
      constraints: ''
```



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CMP Component – Form and Catalog Item

- Each blueprint operation has a form associated with it
- Form has policies to pre-fetch the data and validate form inputs
- Forms are auto-generated and can be customized
- Catalog items are created from provision operation forms

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CMP Component – Stack

- When a blueprint is provisioned via the catalog item, a stack gets created
- Stack is a realized instance of a blueprint in the cloud
- Stack is a unit of deployment
- Stack contains one or more resource
- Stack is assignable to users
- Resources inside a stack can belong to any cloud location
- Stacks can be managed by the lifecycle operations defined on the blueprint

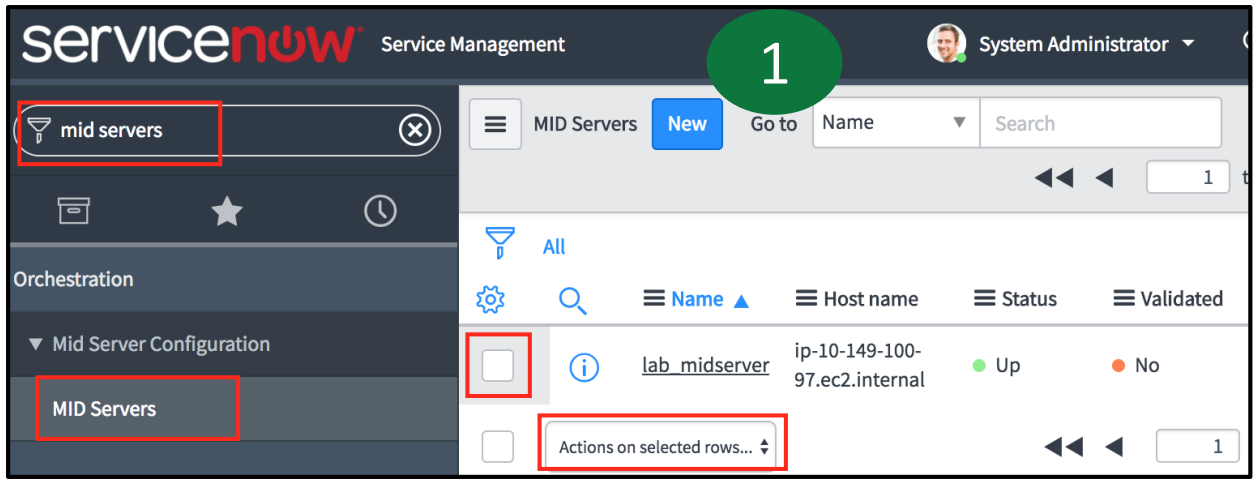
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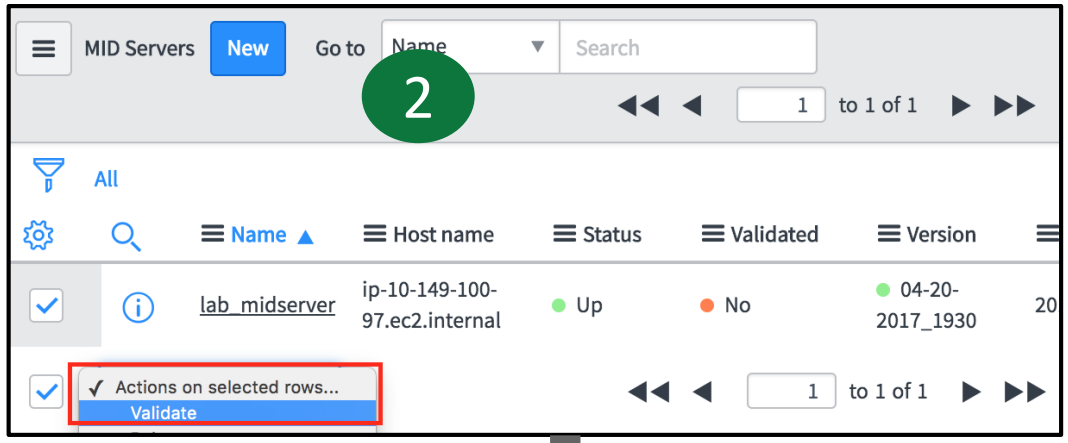
Labs



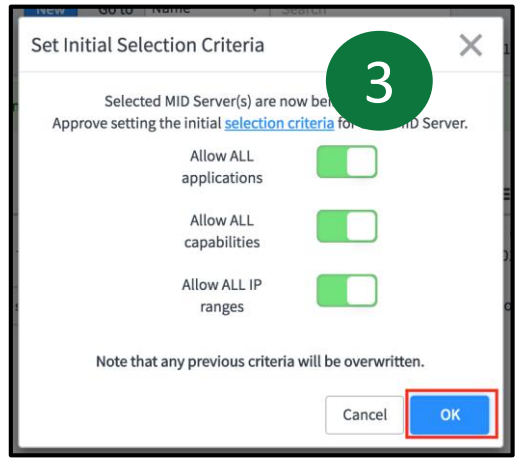
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Errata – Lab – Order Catalog Item – Step 0 – Validate MID Server





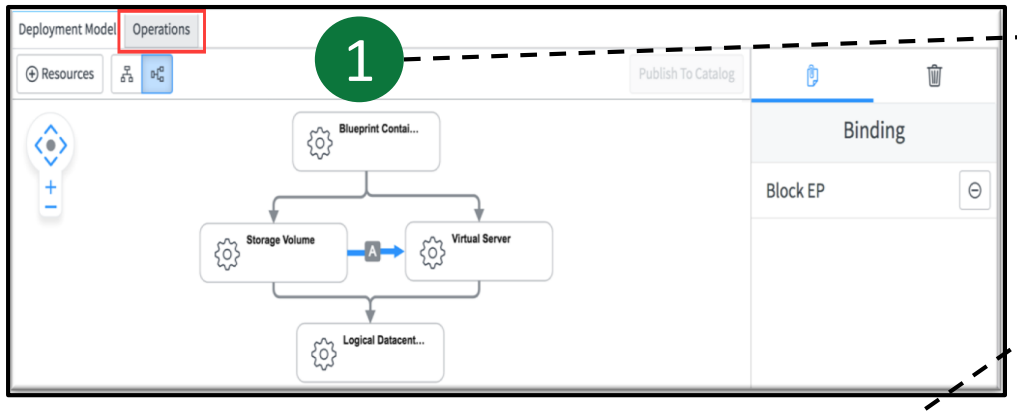
- 1.1 Type **mid servers** in navigation bar
- 1.2 Click **MID Servers**
- 1.3 Click check box on **lab_midserver** and click **Actions on selected rows**
- 2.1 Click **Validate**
- 3.1 Click **OK**

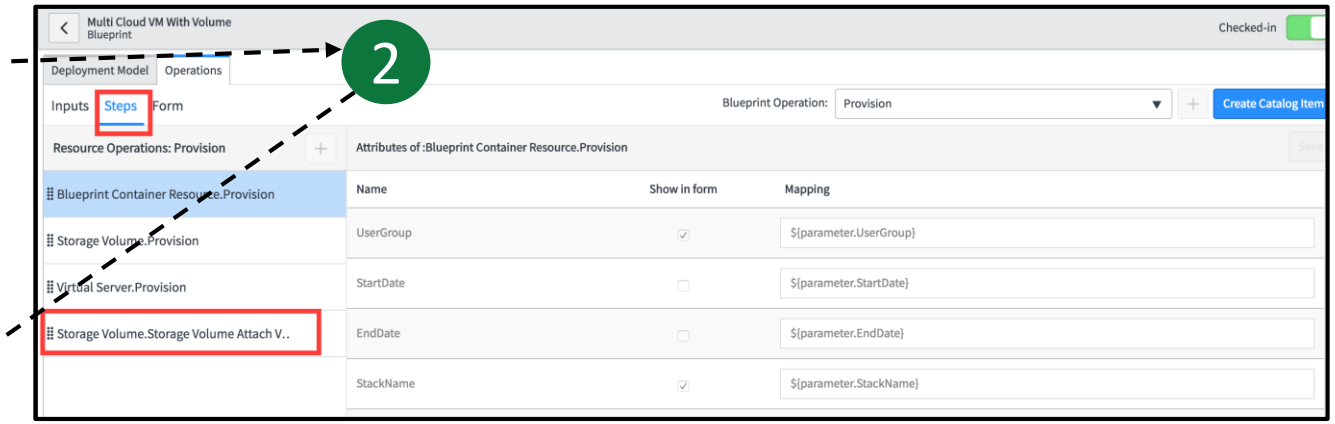


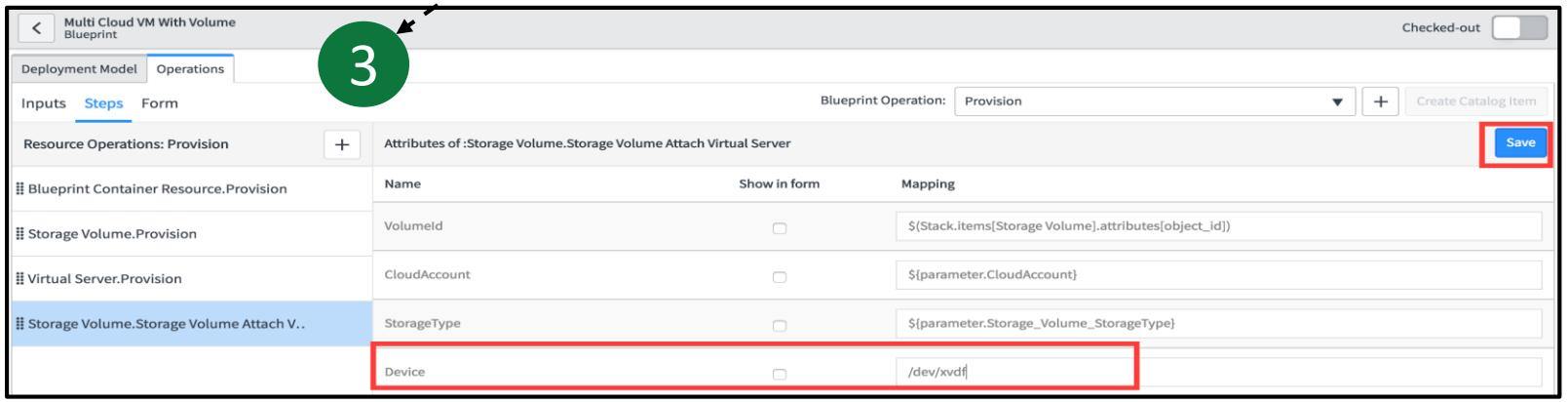
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Errata – Lab - Create a Blueprint – Post Step 14

We need to set some properties for the attach between volume and virtual server to succeed.
We need to set the ‘Device’ as ‘/dev/xvdf’ and save.







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Top Takeaways

1

Blueprints are cloud agnostic

2

Blueprints uses abstract resource blocks to provide agnosticism

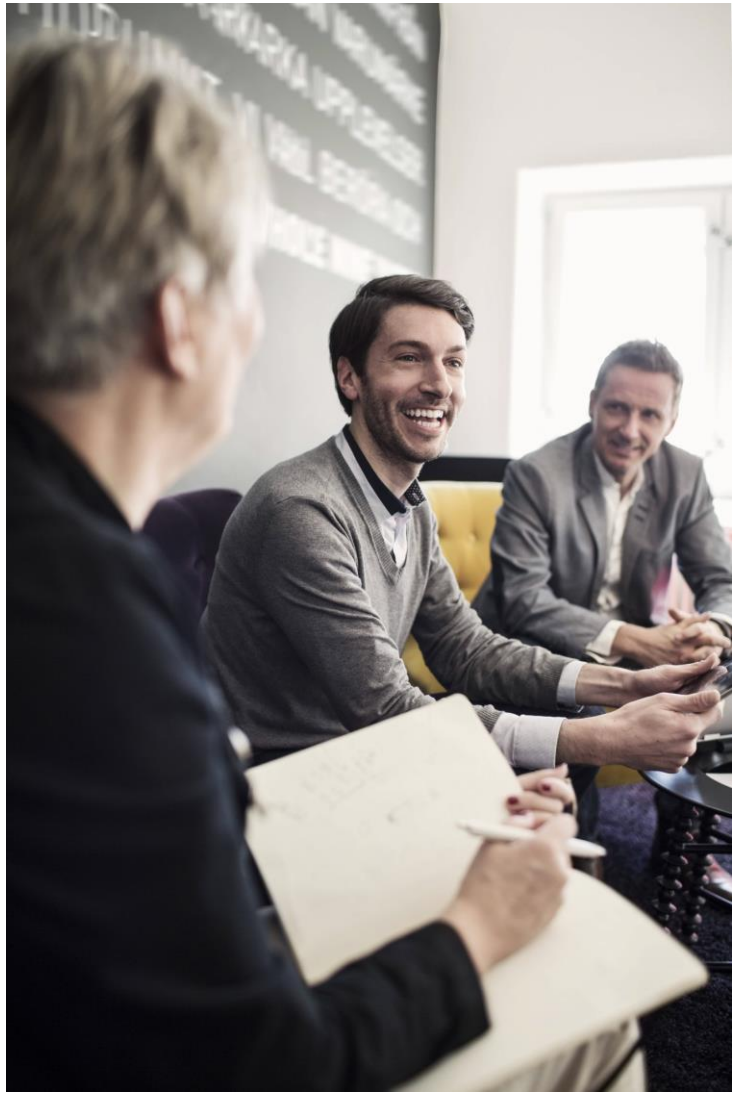
3

Blueprints can be designed from UI or YAML

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Our Next Steps

- Visit us in the Pavilion for a live demo today!
- Register for Cloud Management Labs
  - LAB131988 - Zero to Cloud in an hour with ServiceNow CloudManagement
  - LAB131991 - Cloud Operating Model: Do it your way
  - LAB131989 - Designing Cloud agnostic workloads
  - LAB131990 - Extend your CMP : Build a new connector to a cloudprovider
- Attend Cloud Management Breakout Sessions
  - BRE4116 - What's New in the ServiceNow Cloud Management Platform
  - BRE4111 - Self-Service Access to Enterprise-Grade Cloud Workloads
  - BRE132916 - Cloud Success with ServiceNow and Microsoft Azure
  - BRE4102 - Designing Cloud Portable Workloads
  - BRE4104 - Enterprise Cloud Governance: Achieving Agility With Guardrails
- For early access, please email your presenter
  - Ashok.Madhavan@ServiceNow.con
- As an attendee of this session you will be receiving an invitation to our upcoming **June 8, 2017** and **June 15, 2017** Webinars



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Thank You

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