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VM Orchestration @Actelion: An Overview to a Use Case Of VM Orchestration In the Pharma World

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servicenow

Agenda

- Background
- Why automate?
- Requirements
- Solution
- Top takeaways

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Background

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Speaker Introduction



NAME: Danny Plymesser

TITLE: ITSM Service Manager

FUNCTION: Global Informatics Services

COMPANY: Actelion Pharmaceuticals Ltd.

EXPERIENCE: 10 years working in the ITSM area, 6 years as application manager for ServiceNow

EXPERTISE: Enterprise Service Management, Process Automation, GxP Validation, Pharma-specific requirements analysis

ACHIEVEMENTS: Helped save Actelion business departments over 10,000 hours of redundant work for each Clinical Trial, implemented different automated processes which save IT >$100,000 annually in manual labor

CURRENT PROJECTS: Different data-driven approaches to business process automation

CURRENT TOPICS: I'm geeking out on: Machine Learning, evolutionary algorithms, WebdriverIO

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About Actelion Pharmaceuticals Ltd

NAME: Actelion Pharmaceuticals Ltd

MARKET FOCUS: Actelion Is A Fully Integrated Biopharmaceutical Company With Innovation at its Core

COMPANY'S PRIMARY PRODUCTS/SOLUTIONS: Leader in the science and medicine of pulmonary arterial hypertension (PAH)



Founded in 1997 In Allschwil, Switzerland	
Total employees (December '16)	2,624
• Drug Discovery	388
• Clinical Development	452
• Marketing & Sales	1,443
• Support Functions	341
Global reach with more than 30 affiliates worldwide	
7 Products on the Market: Opsumit®, Tracleer®, Uptravi®, Veletri®, Ventavis®, Valchlor®,Zavesca®	
2016 Sales: CHF 2,412 Billion Core earnings: CHF 992 million	
Over 70'000 Patients currently treated with an Actelion medication	
Extensive Research & Development portfolio	

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ServiceNow @Actelion

2011/2012

- Service Catalog in ServiceNow
- Phase-out paper process
- IT Incident, Change Management (initial validation)
- Business integrations phase 1
  - Procurement
  - Finance
  - Logistics

2013

- IT Problem Management
- IT Demand/Project & Portfolio Management
- IT Service Catalog for Japan
- IT Service Automation v1.0
  - Plain “vanilla” mailboxes
- Business integrations phase 2
  - Clinical Development (IT Related)

2014

- Interfaces (SOAP)
- Business integrations phase 3
  - Compliance
  - Corp Comms
  - Clinical Development sub-departments (IT related)
- IT Service Automation v2.0
  - Clinical Development enhanced “mailbox systems”

2015

- Business integrations phase 4
  - Facility Management
  - Clinical Development sub-departments (Non IT-related)
  - HR
  - Quality
- IT Service Automation v3.0
  - VM automation

2016

- oAUTH 2.0 interface concept
- Business Interfaces (REST)
- Business MasterData automation

2017

- IAM REST interface
- Automated testing
- Automated service mapping
- Leaver process interfaces

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Why Automate?

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Growth and New Technologies LEAD to Multiple Challenges!


Application growth (validated and non-validated)


Company growth


Manual operational tasks, manual documentation

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Current Challenges Facing the Operations Team

- VMs running which are not being used
  - License costs
  - Maintenance costs (patching, upgrade)
- Delivery times for VMs are too long
- Operational team focused too much on manual tasks
- Missing documentation

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Why Automate at All?

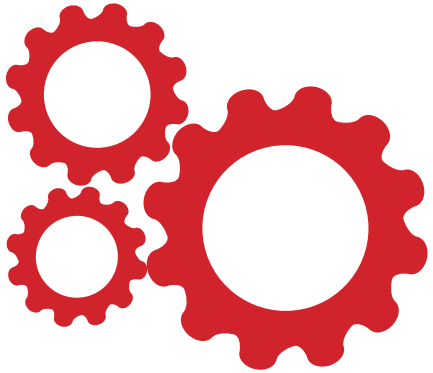
- 24/7 Service
- Auto-scale to different patterns of business activity
- Accuracy
- Can be used as component for more a sophisticated service
- Can be a “template” for unrelated services!

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Requirements

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Identifying a Solution: Key Points



- Automatically create, modify and decommission virtual machines
- Two layer of approvals: business owner side and IT
- Manage both permanent and temporary machines

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Identifying a Solution: ServiceNow



- ServiceNow to handle the complete frontend and approval process
- ServiceNow to manage the lease process for temporary machines
- List of servers should be available in ServiceNow
- Server information should include the who the owner is
- ServiceNow should integrate with the orchestration tool, in a two-way interface

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Wait a Minute!



- Permanent machine creation, modification or decommissioning should be tracked via change request
- Permanent machine approvals need e-signature
- Change Management SOP must be respected!

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Decisions…

- Clear separation of frontend/process between Permanent and Temporary
- Different processes, however modular
  - Temporary → Manage via Catalog Request
  - Permanent → Manage via Catalog Request which triggers Change Management
- Clear separation of duties of systems, allow the orchestration tool to track the “work” executed in ServiceNow

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Solution

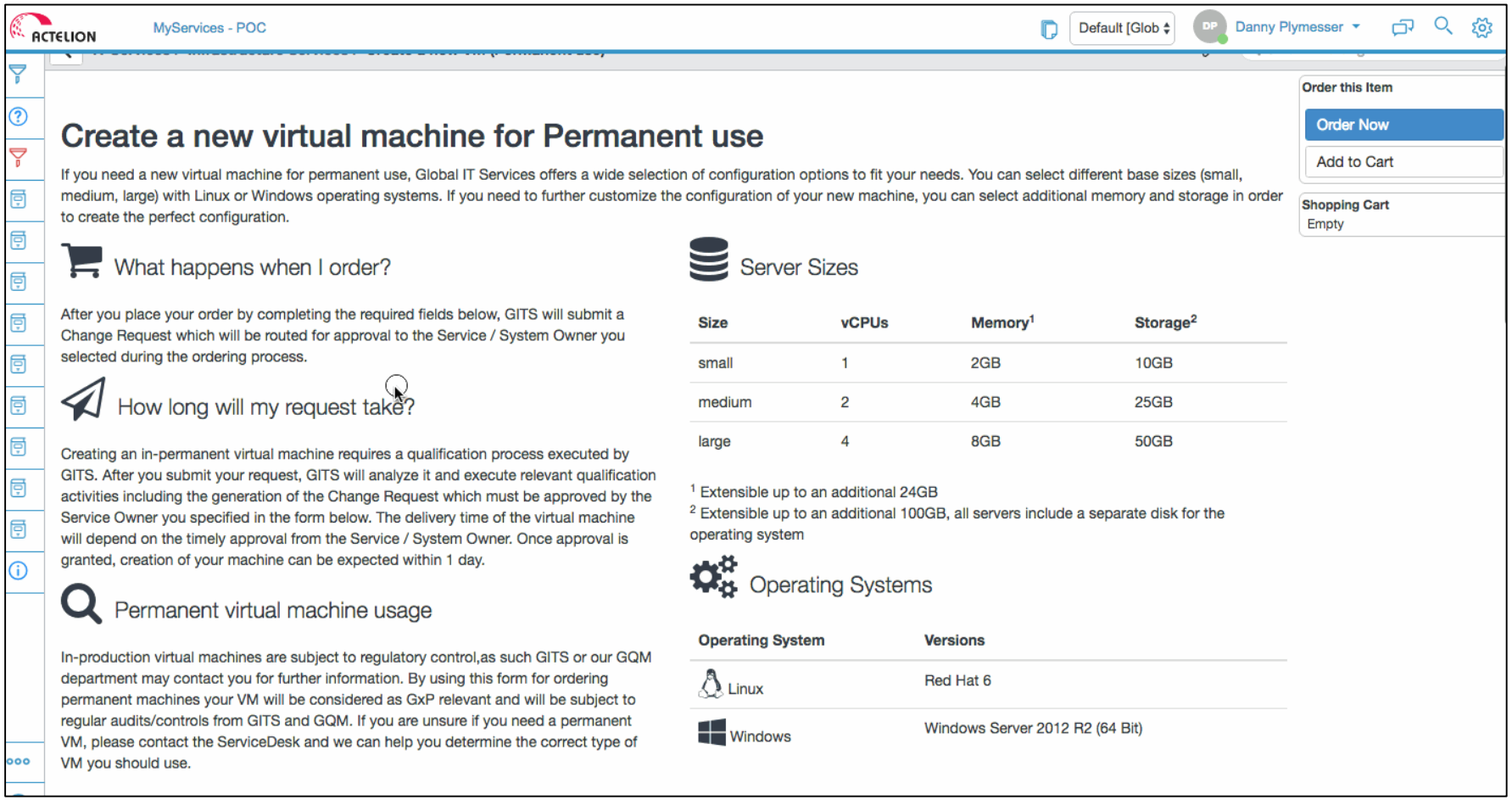
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High Level Diagram



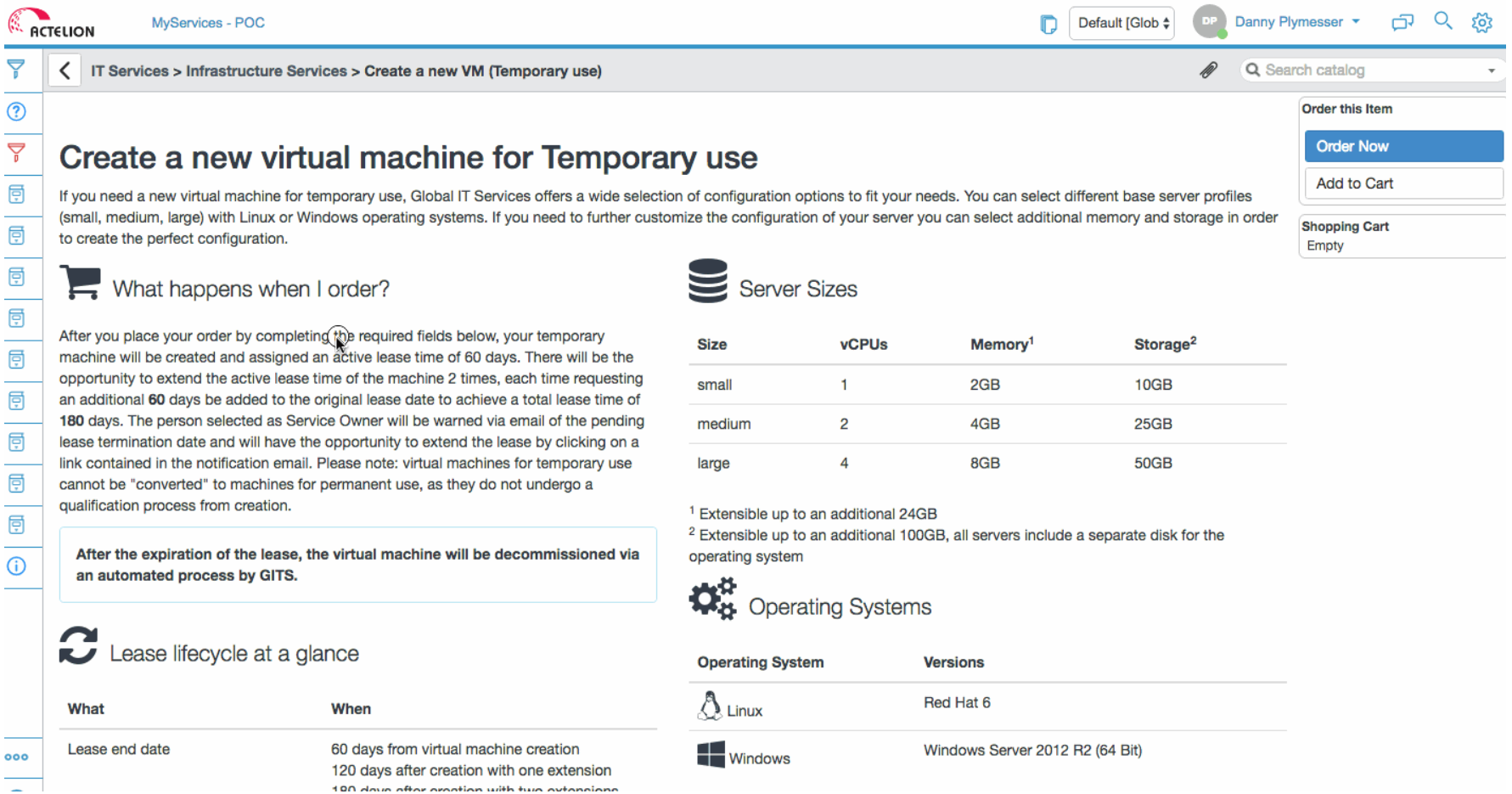
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Permanent Server Frontend



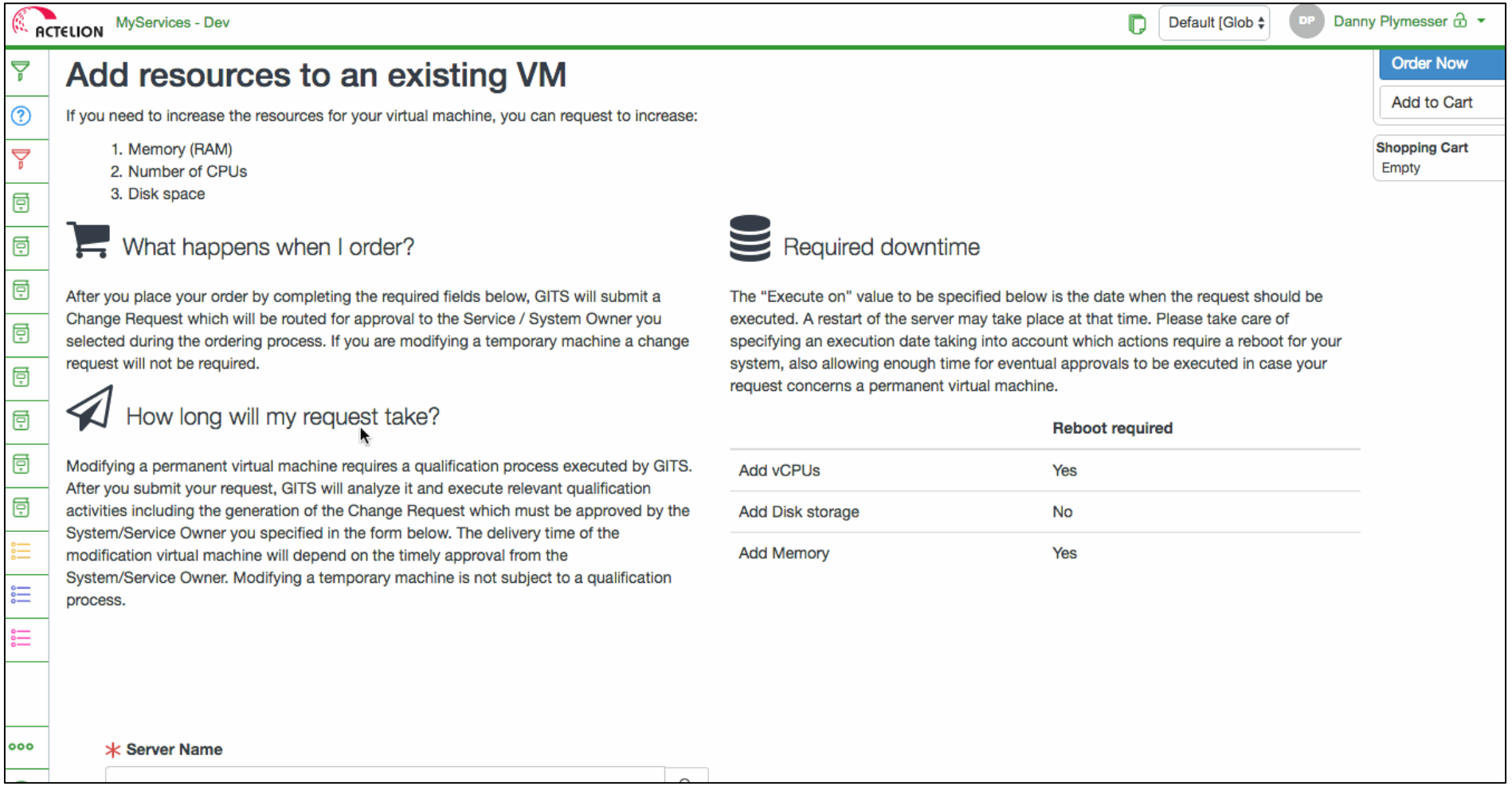
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Temporary Server Frontend



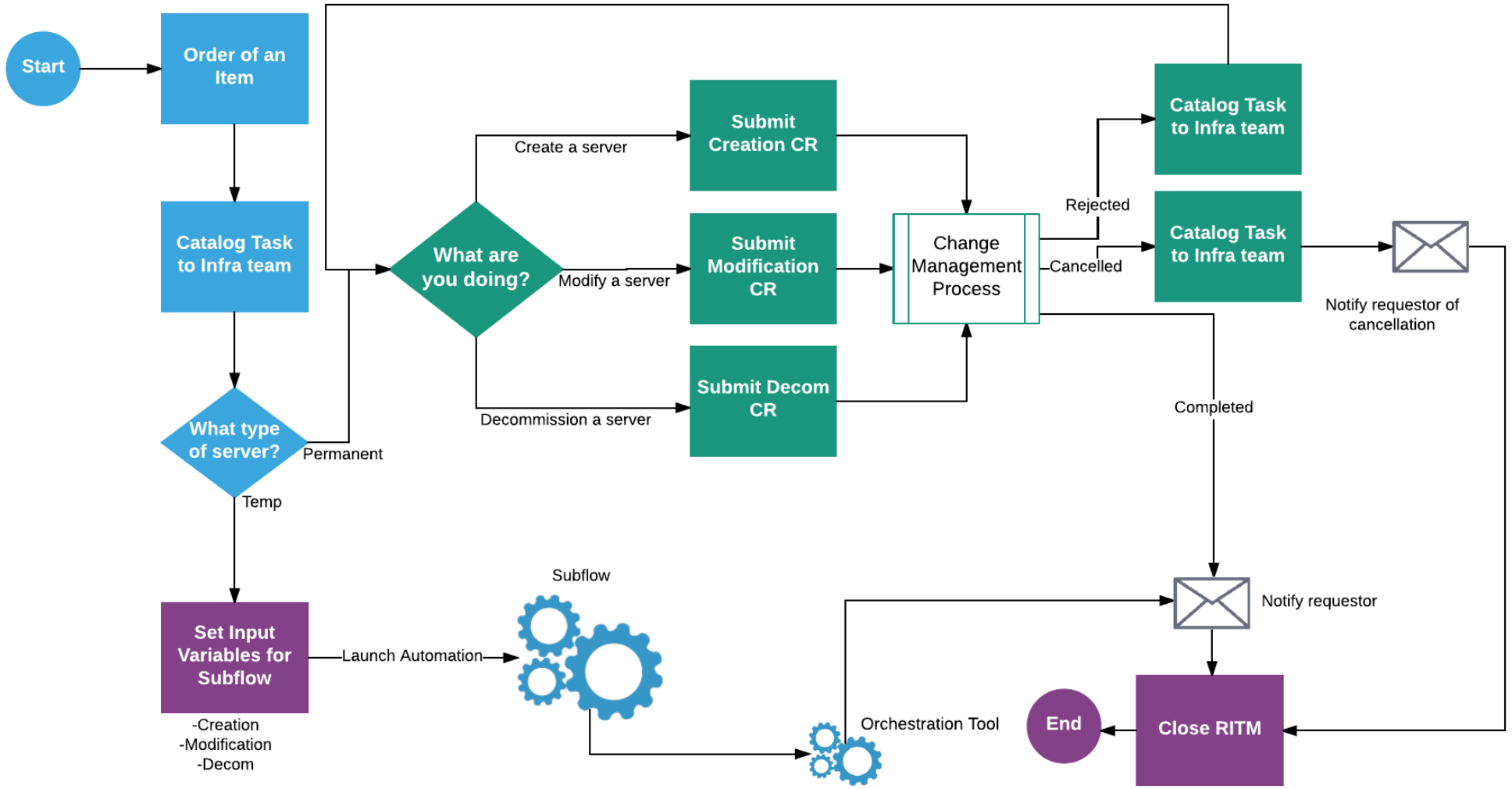
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Modify Resources



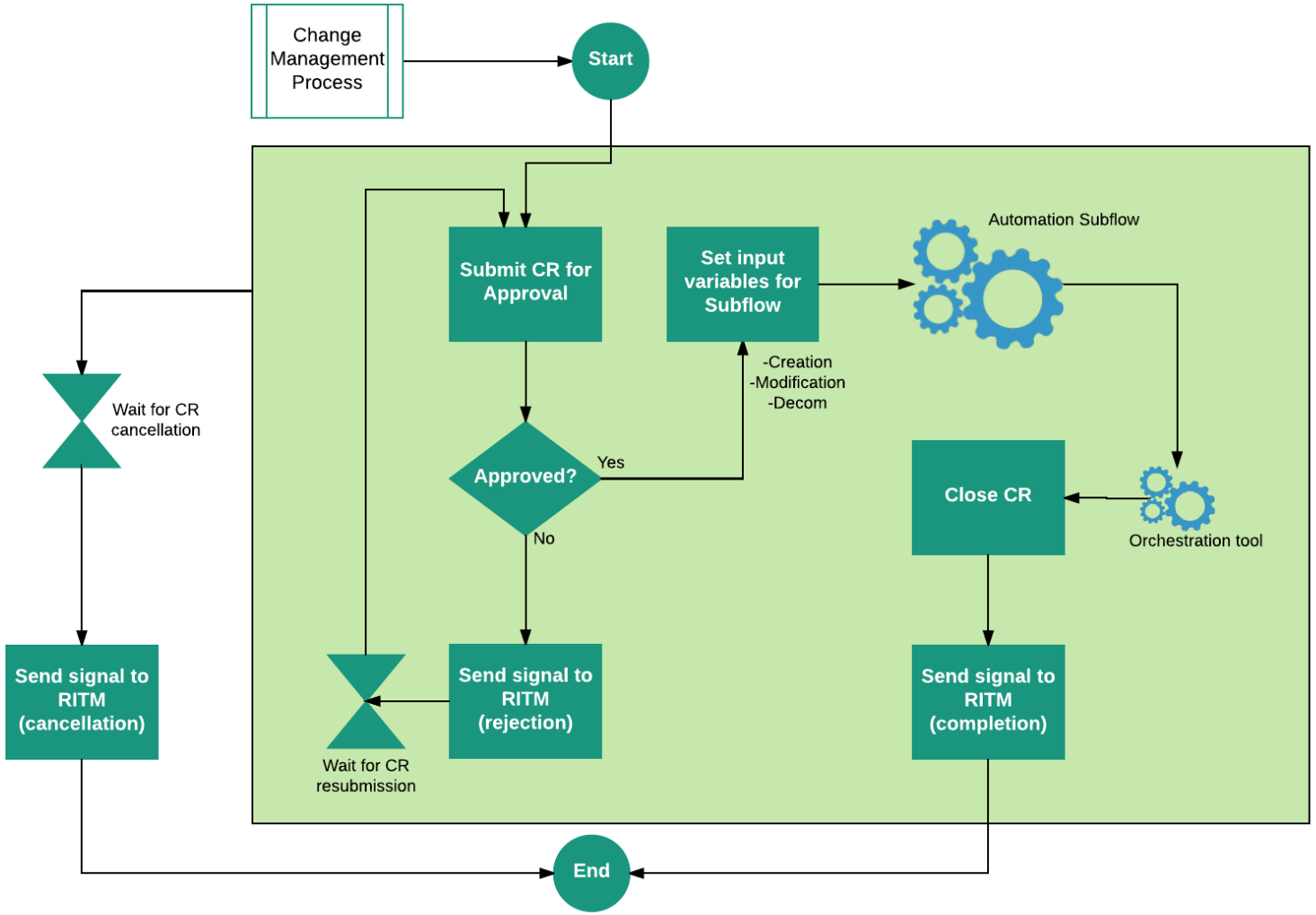
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Requested Item Process



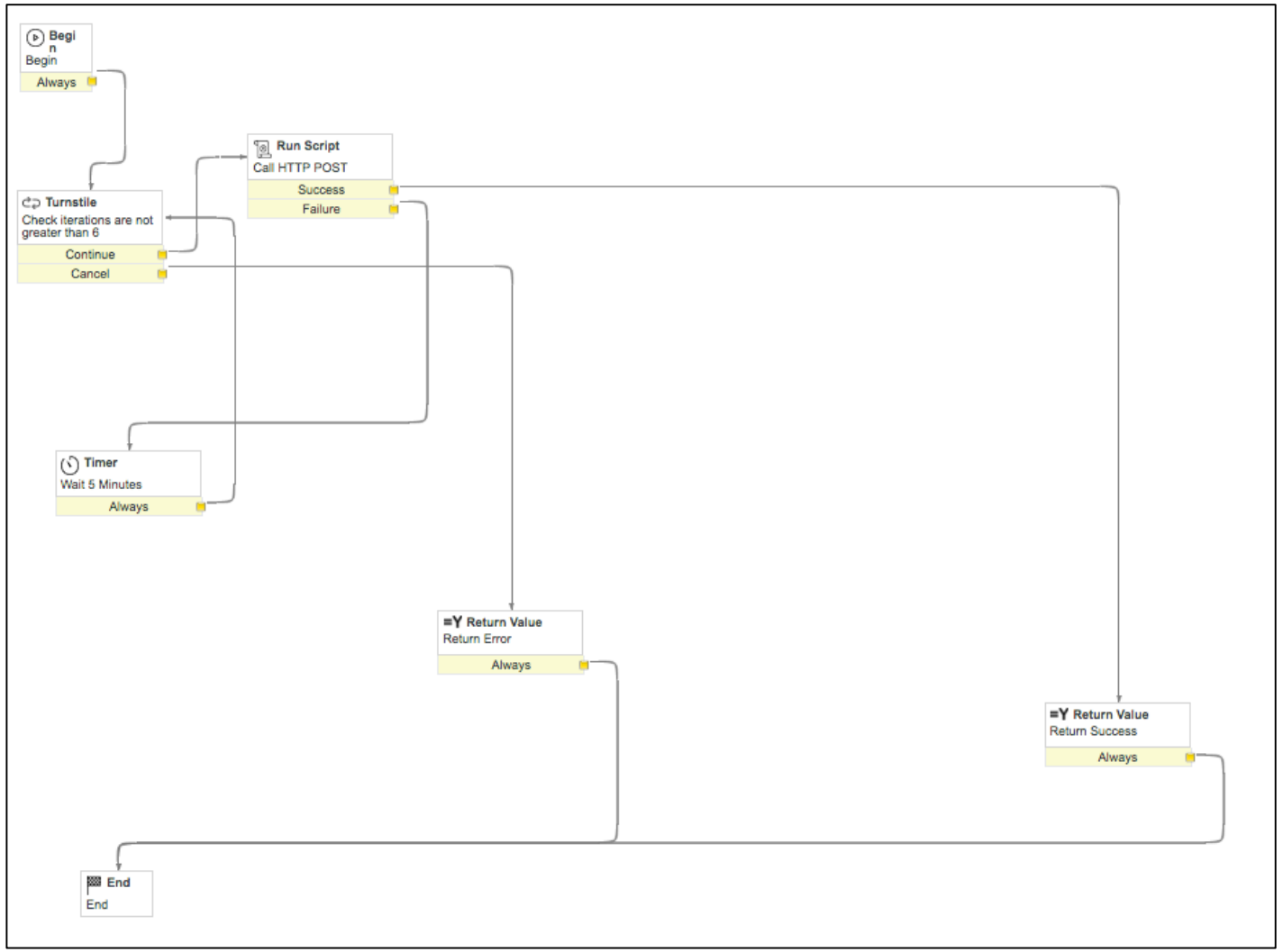
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Change Management Process



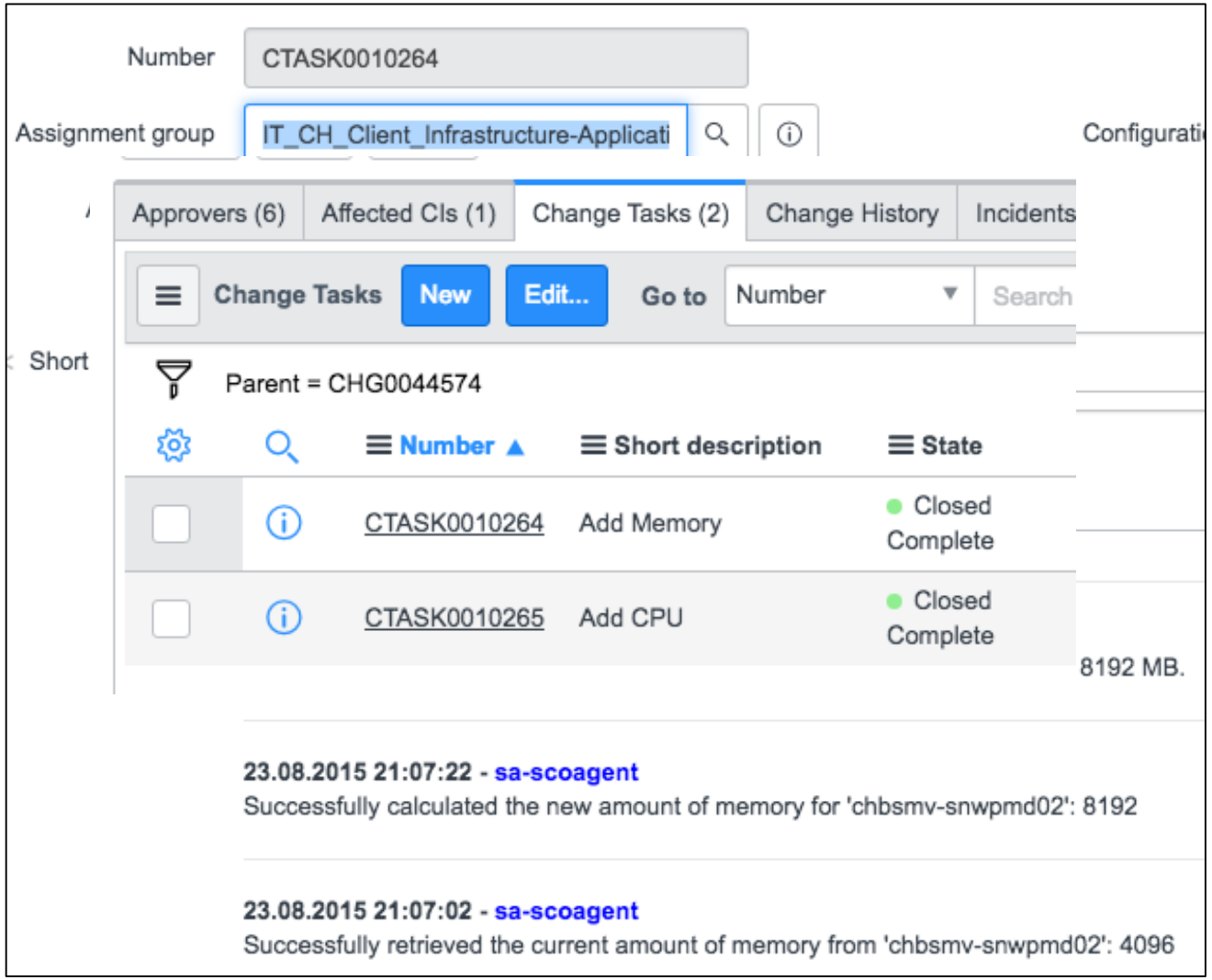
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Automation Subflow



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Integration Into ServiceNow



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Top Takeaways

1

Direct and indirect cost savings

2

Automation never sleeps (or goes on holiday)

3

Scalability and re-usability

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