knowledge17

WORK at LIGHTSPEED™

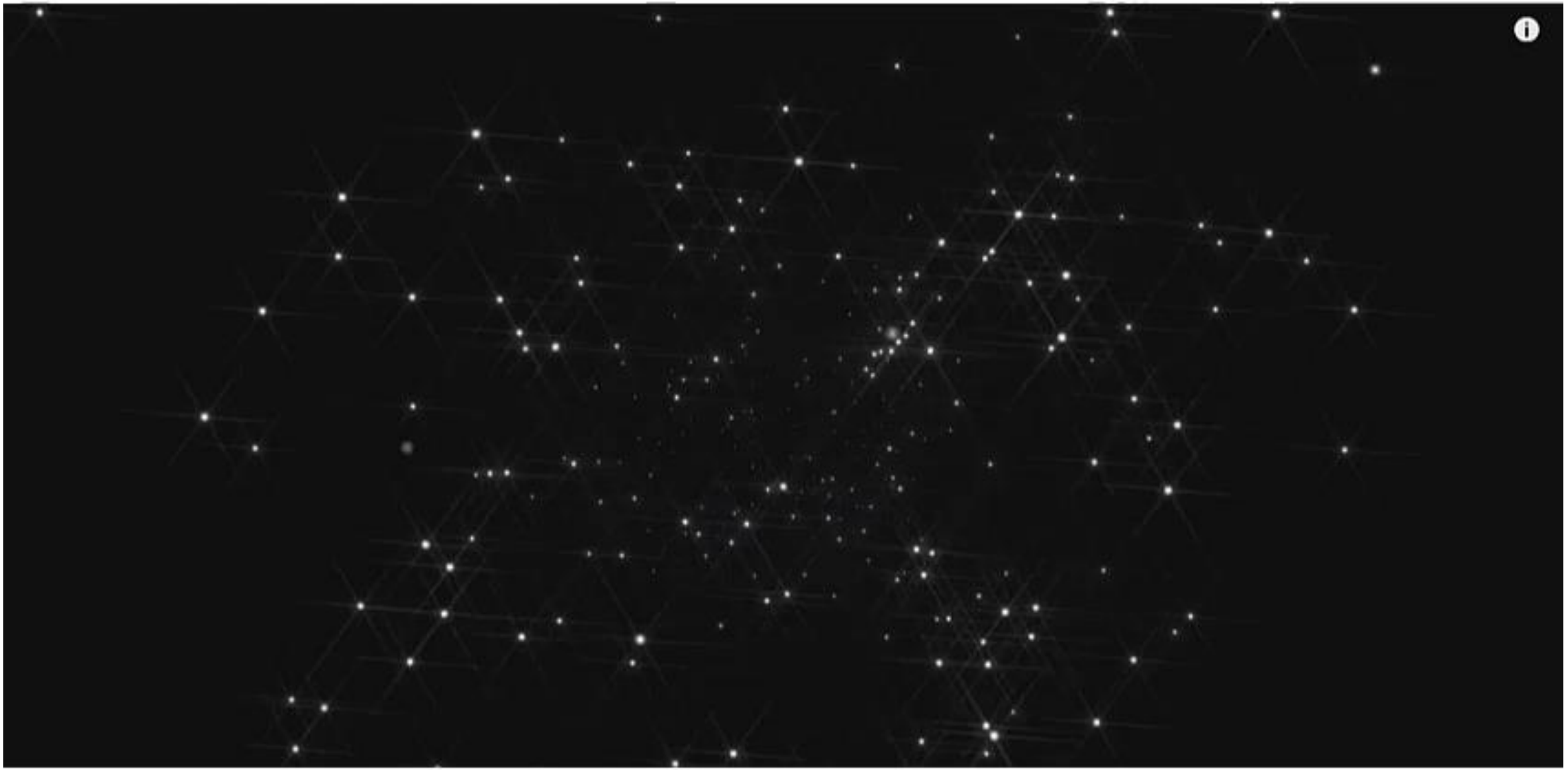
Dude…Where's My Server

PIERRE PICHOT
SENIOR SOFTWARE ENGINEER
DISH

CHRIS RAGA
SENIOR TECHNICAL ADMINISTRATOR
DISH

© 2017 ServiceNow All Rights Reserved

servicenow



© 2017 ServiceNow All Rights Reserved



© 2017 ServiceNow All Rights Reserved

Agenda

- Introductions
  - Presenters
  - DISH
- The Problem to Solve
  - Easily locate hardware in our 25,000 sq ft data center
  - Other products could not meet the necessary requirements
- Impact to Customers
  - SLAs for Equipment troubleshooting and maintenance
  - Resolution duration
- The Final Solution – Data Center Infrastructure Managment A ServiceNow Custom Application
  - What we built
  - Challenges
  - How we built it
  - Demo
  - Next Steps
  - Takeaways
- Summary - Wrap Up
- Q&A Session

© 2017 ServiceNow All Rights Reserved

Speaker Introduction



NAME: Chris Raga

TITLE: Senior Technical Administrator

FUNCTION: Cloud Applications Lead and ServiceNow Development

COMPANY: DISH

EXPERIENCE: 3 years in IT Service Management including 2 years supporting Cloud Applications and ServiceNow Development.

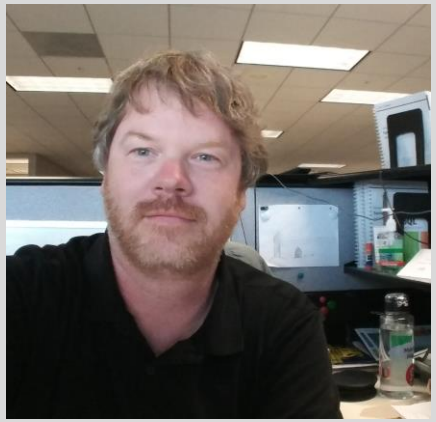
EXPERTISE: Analytics, Security, Orchestration, Catalog, and CMDB

ACHIEVEMENTS: Completed first launch of ServiceNow for DISH (Primarily responsible for developing a dynamic catalog that supports over 13,000 catalog items - K16 Speaker for this effort), custom applications for corporate certificate tracking, contract, PO, and invoice management for our SLING team, and orchestration of SCCM software provisioning and AD Group provisioning. Streamlined the catalog to dynamically pull all File Shares and Group Mailboxes along with their approvers via LDAP connector. Catalog Items are refreshed daily so all information is current. CMDB maintenance and DCIM Point of Contact for Data Center Teams.

CURRENT PROJECTS: Driving process efficiencies. Automating Procurement and HR work streams

© 2017 ServiceNow All Rights Reserved

Speaker Introduction



NAME: Pierre Pichot

TITLE: Senior Software Engineer

FUNCTION: Development/Design

COMPANY: DISH

EXPERIENCE: 10+ years of web application development. I have been developing in ServiceNow for nearly two. I enjoy coming up with new ways to improve on processes by creating custom applications when out-of-box just isn't enough.

EXPERTISE: Coldfusion, PHP, SQL, Javascript and others

ACHIEVEMENTS: Built over 40 web based applications. Implementation of ServiceNow. ServiceNow Certified Application Developer. Presenter at Knowledge 16

CURRENT PROJECTS: Improving DCIM, Custom Resource Planning tool, Instabul Upgrade, UI/UX...

© 2017 ServiceNow All Rights Reserved

My Company



NAME: DISH

INDUSTRY: Telecommunications (Satellite Television)

MARKET FOCUS: DISH provides satellite television programming (DISH) and OTT television streaming (Sling)

COMPANY'S PRIMARY PRODUCTS/SOLUTIONS: Satellite Television, OTT Television Streaming (Sling), In Home Solutions

COMPANY-WIDE INITIATIVES: Improved Customer Experience, Automate Manual Processes, Increased Efficiency in Issue Resolution, Increased Productivity Through IT Tools and Services

© 2017 ServiceNow All Rights Reserved

Session Overview



Objectives

- Use DISH's story to illustrate how to think outside of the box and utilize ServiceNow to overcome challenges
- Provide insight on how DISH built a dynamic visualization of its data center



What You Will Learn

- DISH's approach to Data Center Infrastructure Management (DCIM)
- How DISH used ServiceNow to build a dynamic DCIM Visualization Tool
- How DCIM and ServiceNow helped DISH improve managing their on-site data center
- Lessons learned in our DCIM Visualization Tool build-out:
  - Best practices
  - Issues to avoid in future ServiceNow development

© 2017 ServiceNow All Rights Reserved

Context – Setting the Stage

WHY THIS PROJECT CAME TO US

- 2 other vendors contracted to develop
- Vendors could not meet requirements
- Costs were too high ($25-120K a year)
- CMDB and Asset tables already had a majority of data needed

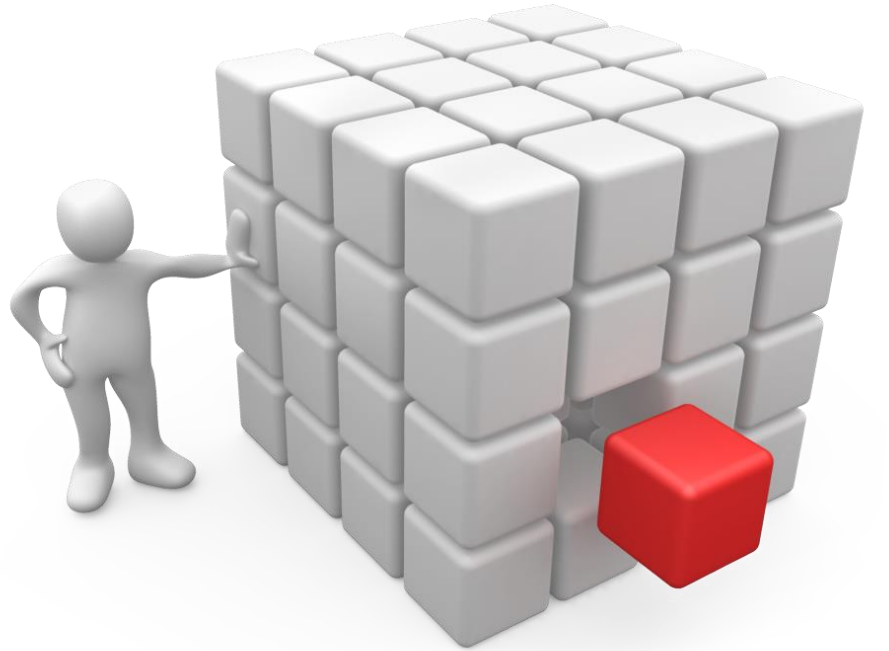
REQUIREMENTS

- Easy search functionality
- Use existing data in ServiceNow
- Touch Screen Compatible
- Enhanced views
- Utilize existing resources for visualization
- Easy to manage and maintain

© 2017 ServiceNow All Rights Reserved

Goals:

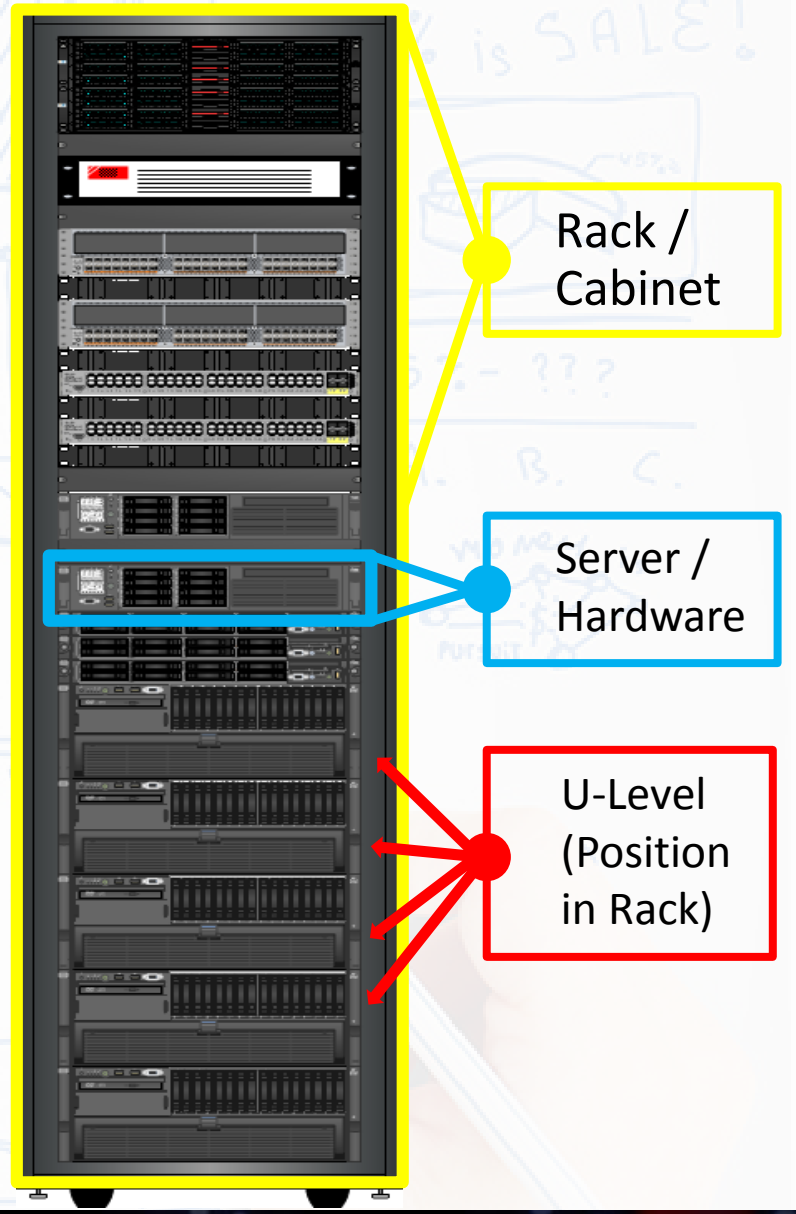
- Must be built in the ServiceNow platform
- Meeting all our customer's requirements
- Provide a level of quality that matches or exceeds expectations
- Decrease time required to locate hardware
- Decrease resolution times



© 2017 ServiceNow All Rights Reserved

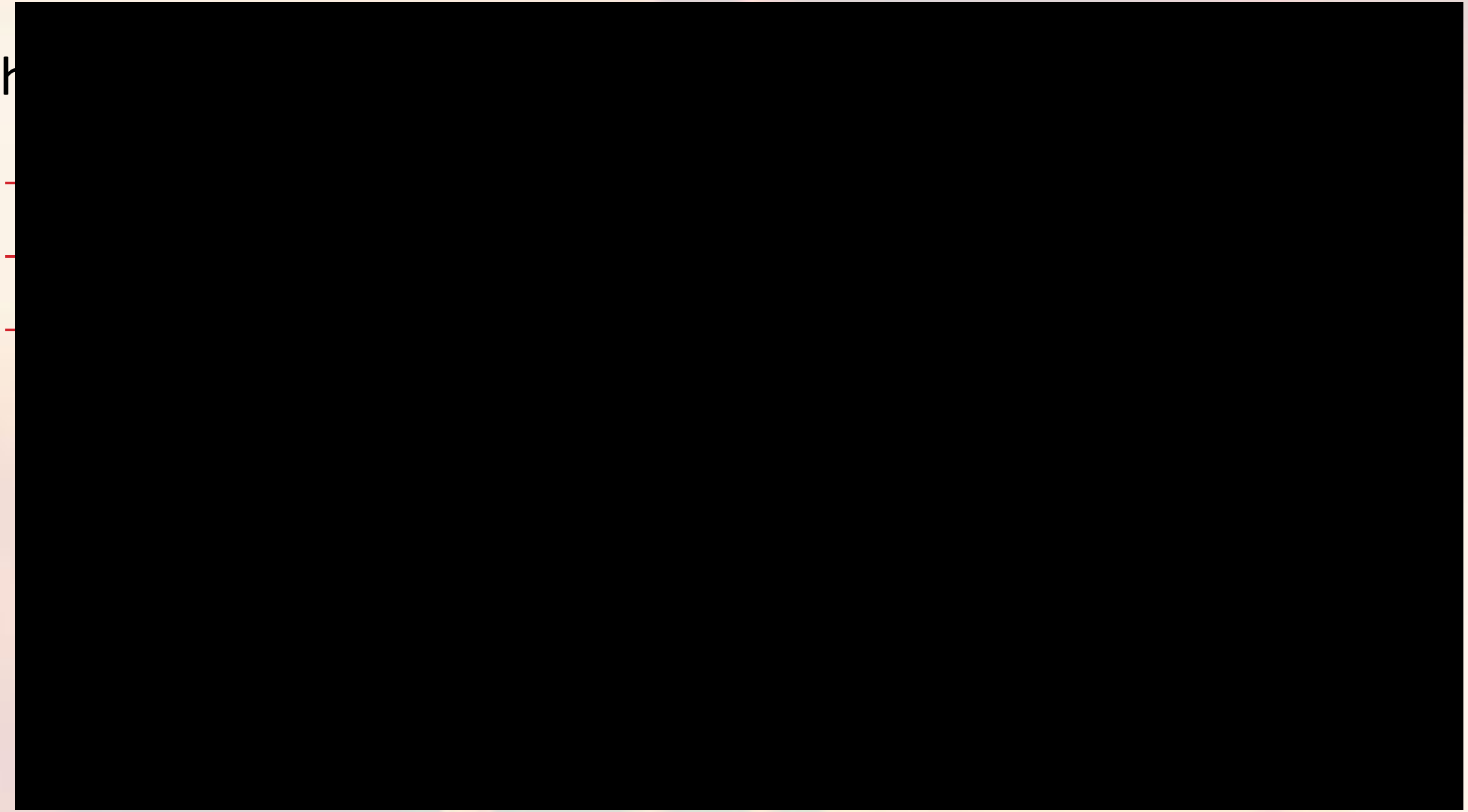
Solution – Strategy for our Approach

- Convert existing data center drawing to an interactive map
- Use a simplistic approach strategy and build from there
- Utilize Asset and Model tables to identify location in:
  - Data Center
  - Rack/Cabinet
  - U-Level (Rack Position)
- Determine what additional information is needed to build map dynamically
  - Additional Fields in existing tables
    - Rack/Cabinet
    - U-Level
  - Additional Tables
    - Data Center Information
    - Rack Information
    - Categories (How Racks are organized)



© 2017 ServiceNow All Rights Reserved

Th



© 2017 ServiceNow All Rights Reserved

A Di

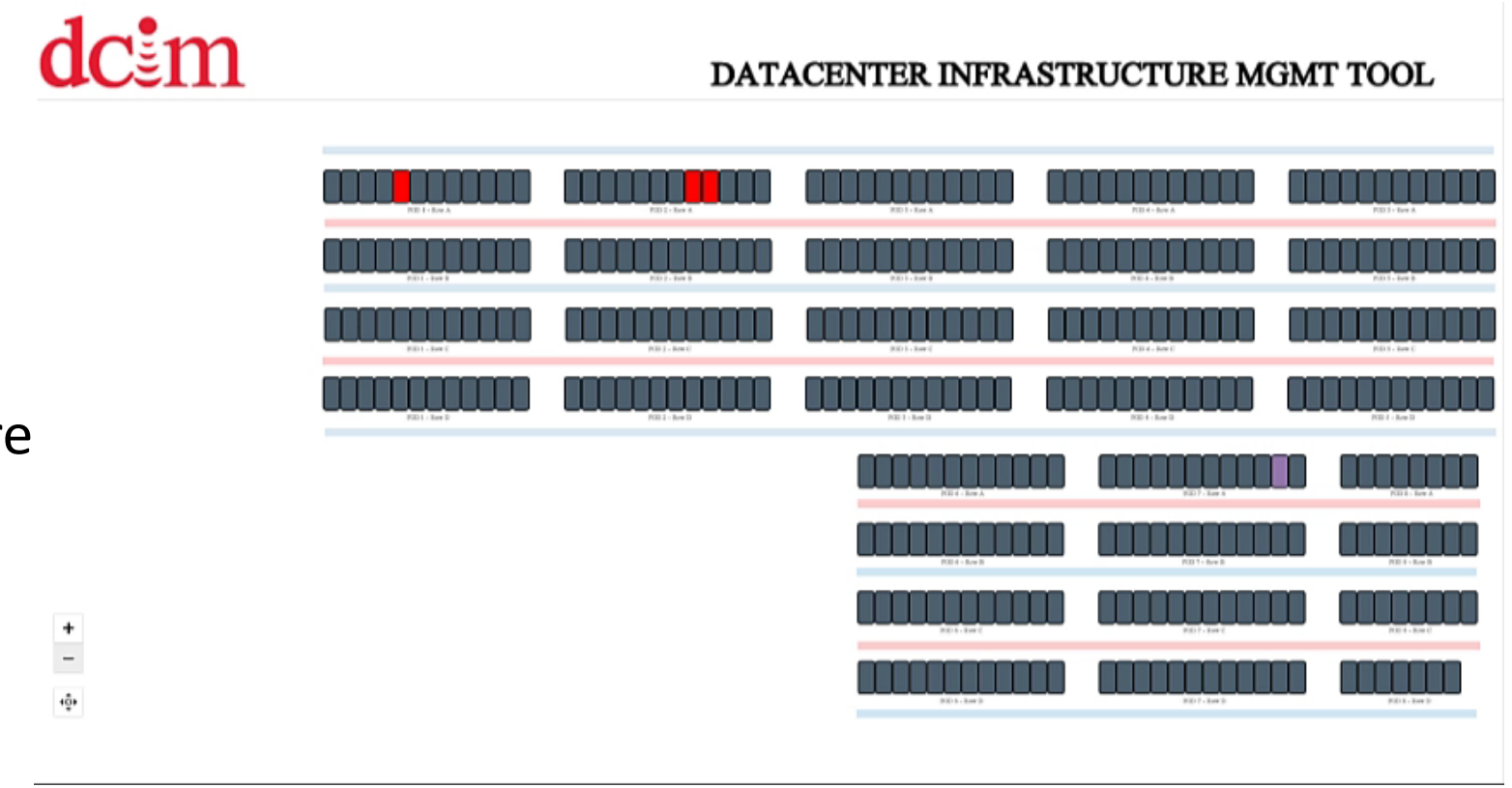
- U
- U
- U



© 2017 ServiceNow All Rights Reserved

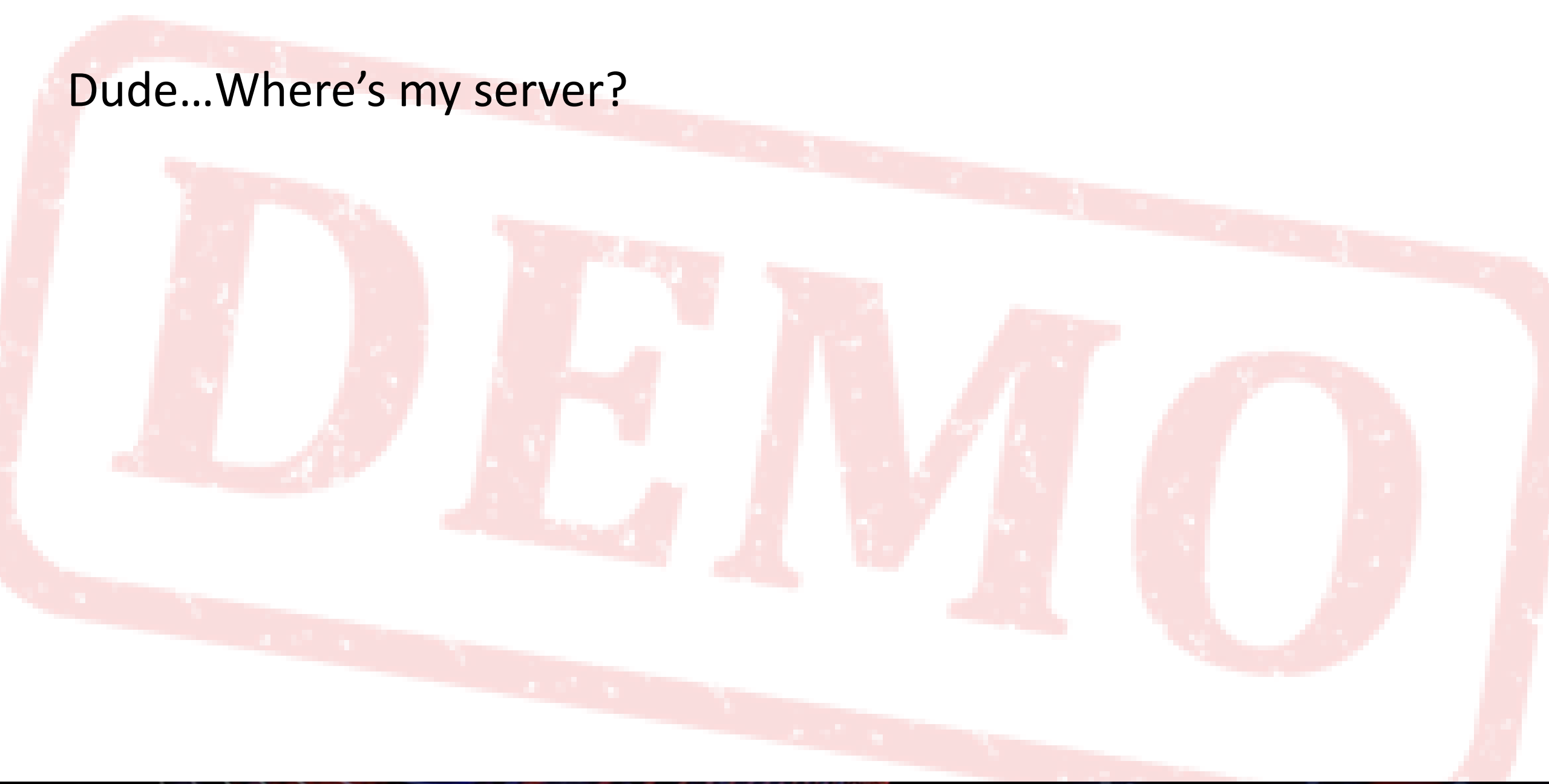
Meeting the Requirements…and More

- Interactive map
- Search functionality
- Categorize racks
- Rack Highlight
- Show rack image with hardware
- Identify hardware in the rack
- Hardware information



© 2017 ServiceNow All Rights Reserved

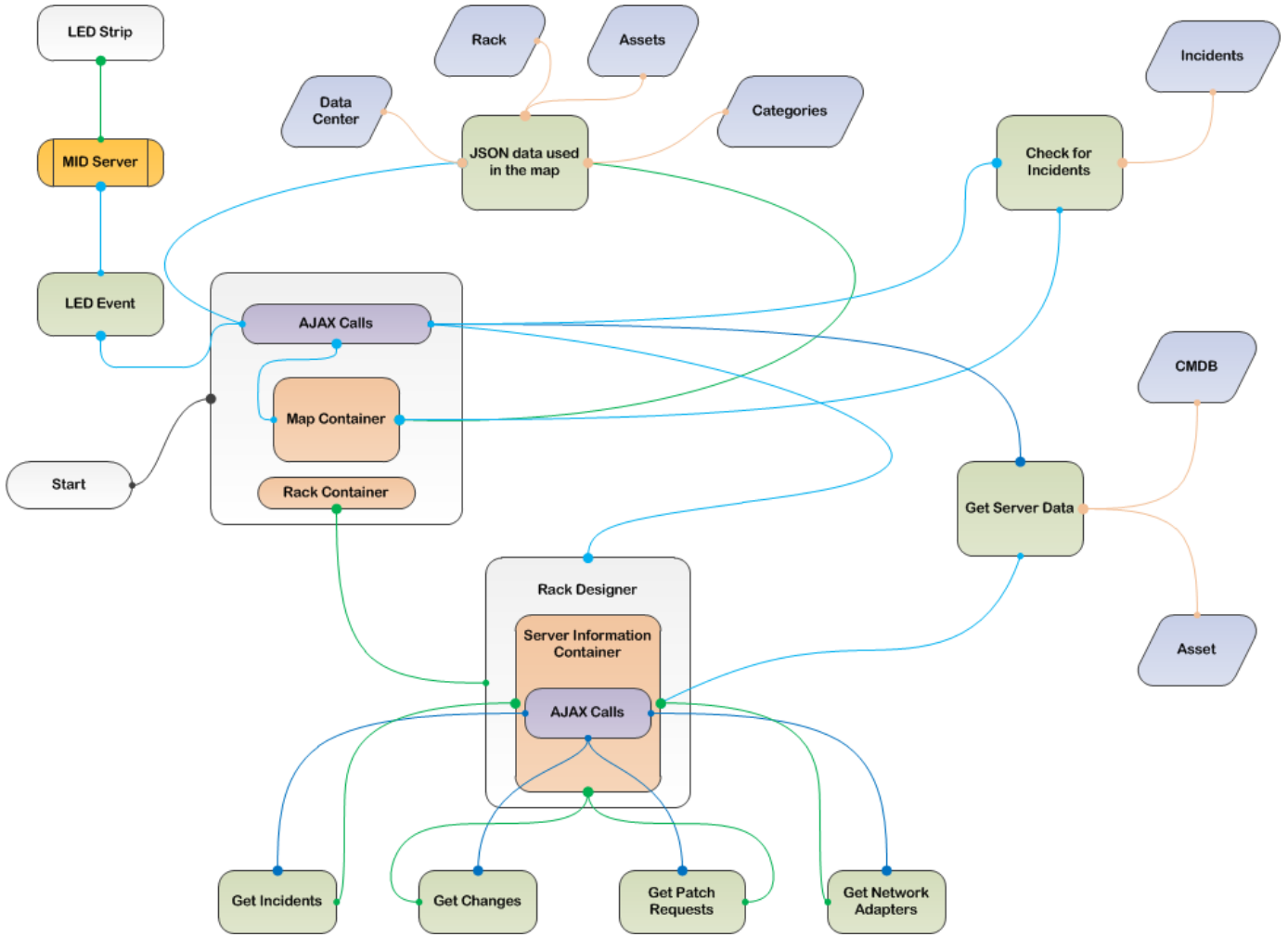
Dude…Where's my server?



© 2017 ServiceNow All Rights Reserved

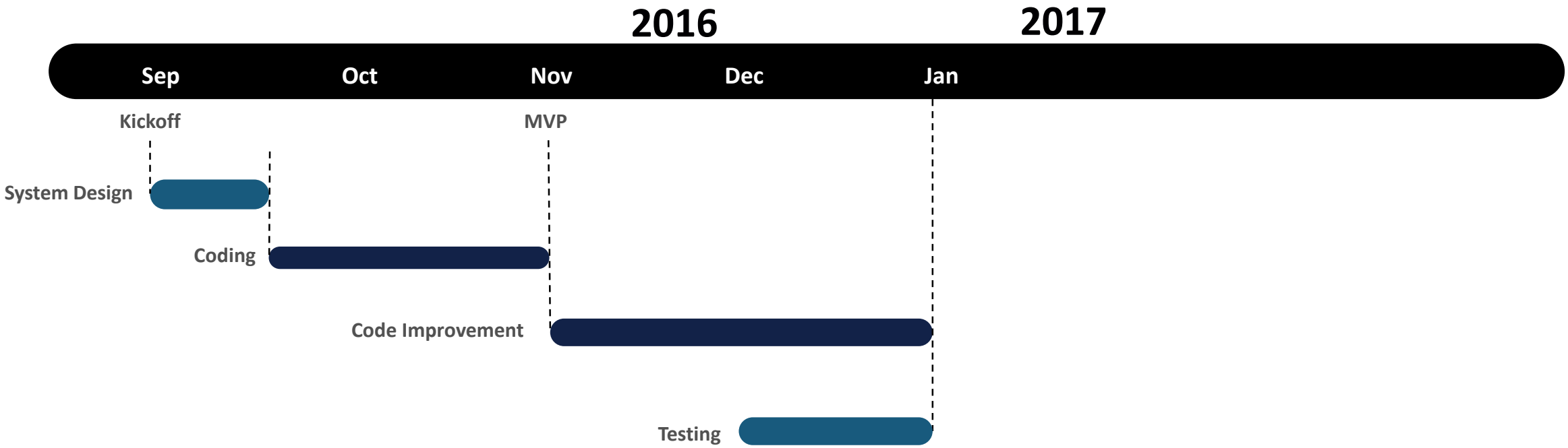
Let’s get a Little Technical…

- Main UI Page
- AJAX Calls
- Child UI Pages
- Light-up LED



© 2017 ServiceNow All Rights Reserved

Development Timeline



© 2017 ServiceNow All Rights Reserved

What's Next for DCIM

- Real time rack identification as text is entered in search field
- Highlight racks that have hardware with open incidents
- Add multiple data centers
- Smart LED technology
- Customizable filter for hardware information
- QR Labels for easy asset audits and searches
- 3D map
- Dynamic SVG build



© 2017 ServiceNow All Rights Reserved

Value Outcomes

- CMDB adoption drastically increased
- Time to find hardware for maintenance has decreased
- MTTR (Mean Time To Resolution) has decreased
- Improved data quality from various teams maintaining data in the CMDB
- Increased visibility for hardware not being discovered

© 2017 ServiceNow All Rights Reserved

Lessons Learned

1. Using an SVG to manipulate a image was easy and effective for this project.
2. Using reference fields when possible to prevent inaccurate data. (Don’t be afraid to add tables)
3. Keep it simple and customer friendly.
4. Customer experience should exceed expectations and help define the end product.
5. Provide easy interface for end-user to maintain their own data.
6. It’s impressive what you can do with ServiceNow.

© 2017 ServiceNow All Rights Reserved

Top Takeaways

1

Customer experience should define the end product

2

Data accuracy defines the value of the product

3

It’s impressive what you can do with ServiceNow

© 2017 ServiceNow All Rights Reserved

Thank You

PIERRE PICHOT
SENIOR SOFTWARE ENGINEER
DISH

CHRIS RAGA
SENIOR TECHNICAL ADMINISTRATOR
DISH

© 2017 ServiceNow All Rights Reserved

Q & A

PIERRE PICHOT
SENIOR SOFTWARE ENGINEER
DISH

CHRIS RAGA
SENIOR TECHNICAL ADMINISTRATOR
DISH

© 2017 ServiceNow All Rights Reserved

Take the Survey

Please take a moment to complete a session survey in the Knowledge17 app.

Thank You

Pierre Pichot

Senior Software Engineer

DISH

Chris Raga

Senior Technical Administrator

DISH

© 2017 ServiceNow All Rights Reserved