
uDCV User Guide Documentation

Release 3.0.3

uinnova

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Preface

This documentation provides guidelines on how to use uinnova DataCenter Visualizer, or uDCV. uDCV is the data integration and visualization platform, which enables users to visualize the information about the data center facilities.

- **Asset Visualization**
 - Asset location, physical appearance, advance multi-criteria search
 - Large 3D datacenter models library of IT infrastructure and equipment available
 - Integrated asset, configuration and alert information
- **Environment Visualization**
 - 3D Datacenter campus, buildings, floors, rooms and cages views
 - Landscape and drone style fly-over views
- **Cabling Visualization**
 - Electrical wires and conduits
 - Patch panel and cabling
 - Port-to-Port connection path
 - HVAC Utility pipeline
- **Monitoring Visualization**
 - IT equipment performance and alerting
 - Datacenter room temperature and humidity
 - UPS/PDU/Air Conditioning electrical power
- **Presentation Visualization**
 - Self-direct 3D animation
 - Embedded Microsoft PowerPoint presentation in 3D datacenter view

Table of Contents

2.1 UI Walkthrough

2.1.1 About Scenes

uDCV support hosts multiple 3D datacenter models, or *Scenes*, and each scenes may has its own model library, configure, asset ans wiring data.

View Scene List

Click *Scenes* link on main page to view scene list.



Enter 3D Scene

Select scene and click `enter scene` button



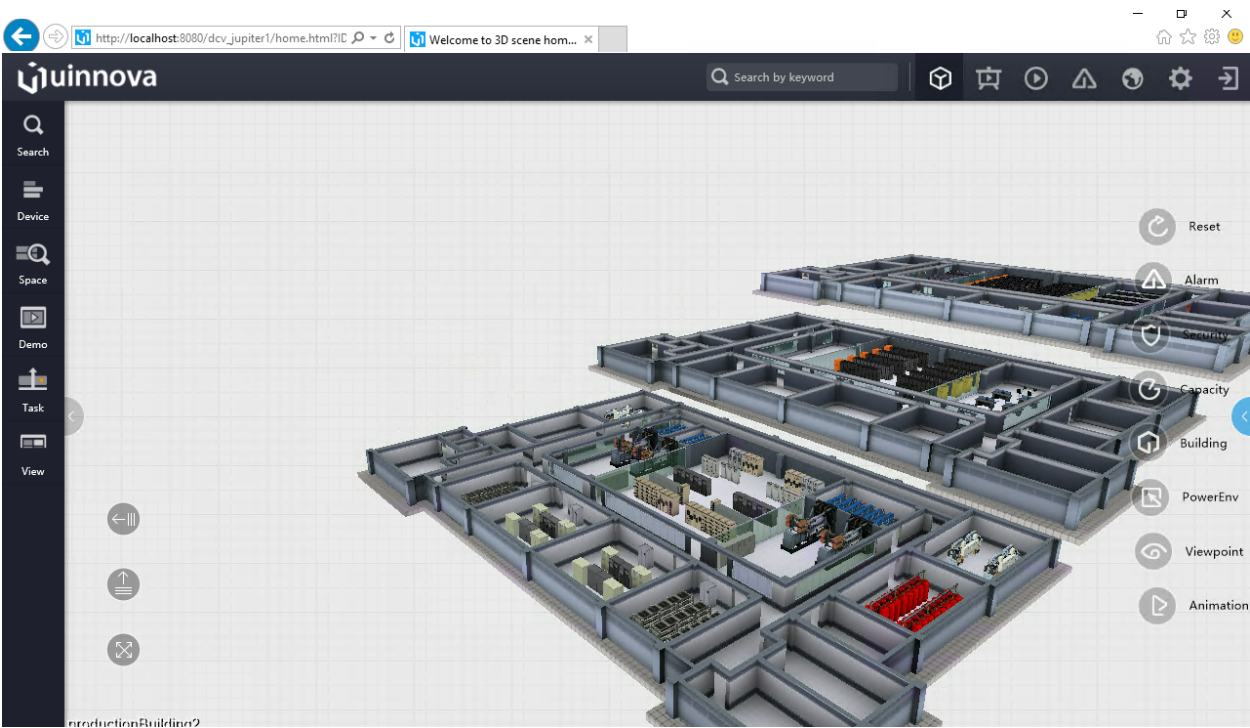
Note: User may be prompted to install T3D plugin while open 3D scene for the first time.

2.1.2 Navigation in 3D scene View

There are 4 major UI areas in 3D scene view:

Table 2.1: 3D Scene UI Area

Area Position	Function Description
Top Navigation Bar	Search Box, Alarm Switch, Shortcut to Management Console, Home
Left Navigation Bar	Advance Search, Space Search, Task Management, Animation
Right Navigation Bar	Analysis Function Shortcuts
Central	3D Scene



2.2 Mouse and Key Binding

User use mouse and Keyboard to explore and interact with 3D scene.

2.2.1 Mouse

Table 2.2: **Mouse**

Mouse Click	Function Description
Single Click	Show Information Panel
Double Click	Select object
Right Click	Escape
Mouse Over	Show object information on left lower corner
Wheel Scroll	Zoom in/Zoom out
Wheel Click and Hold	Move scene
Left Click and Hold	Rotate scene

2.2.2 Key-binding

Table 2.3: **Key-binding**

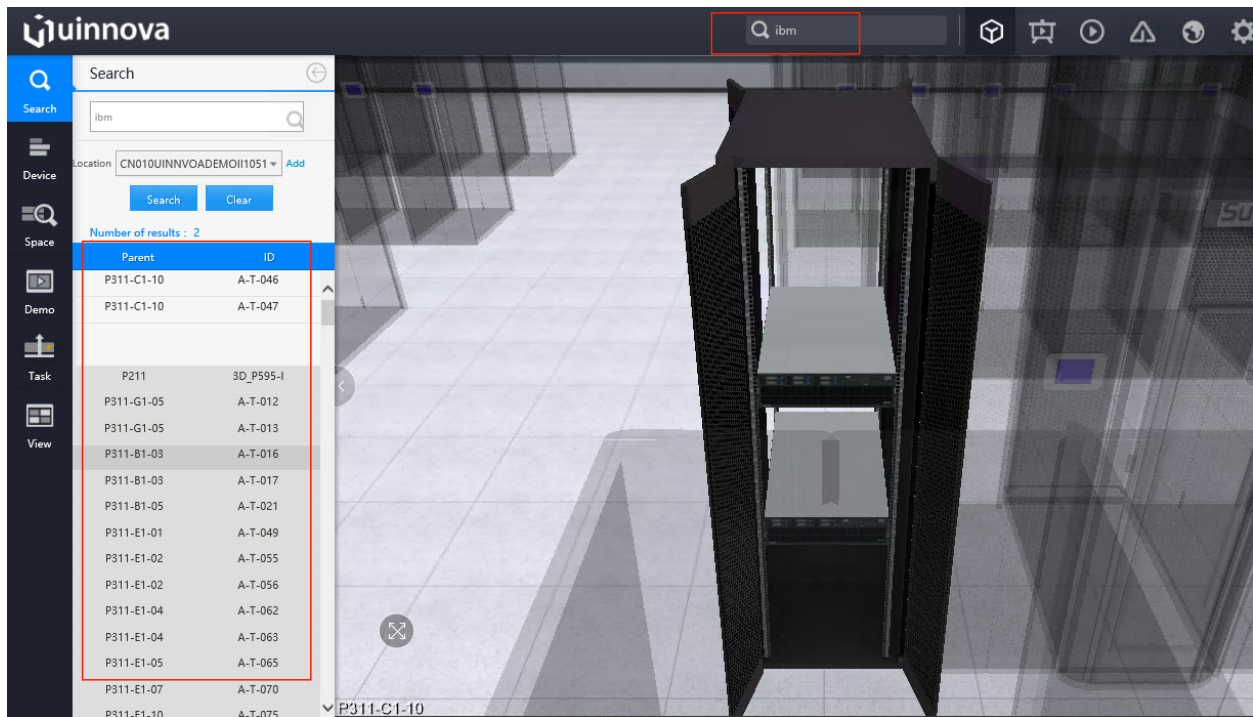
Key Name	Function Description
W	Move camera forward
A	Move camera to left
S	Move camera backward
D	Move camera to right
Q	Move camera up
Z	Move camera down

2.3 Search

uDCV supports **full-text search**, as well as multiple criteria search which allow more specific scoping.

2.3.1 Basic Search

Enter keyword in upper search box and hit enter, search result UI will appears automatically on the left. Single click on one result item(if any), system will fly camera to the item. As shown below:



Note: Search box use **full-text search**, any match on object properties will return as result, for instance, enter “HP” will shows all HP servers, storages and printers, and server room name includes “HP”, etc.

2.3.2 Advance Search

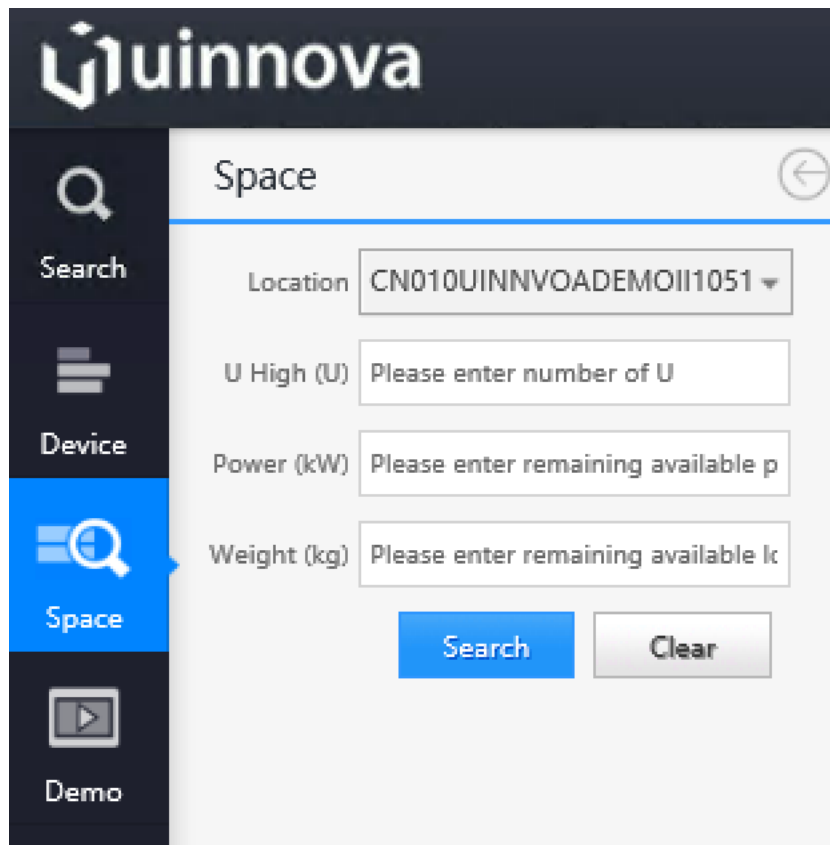
To reduce the search scope, user can specify multiple condition on **Advance Search**. **Advance Search** is located at left navigation bar.

- All Object properties can be used as search criteria :

- Support AND operator between search criteria

2.4 Space Search

uDCV supports space & power search to find cabinets candidates given space, power and/or weight requirements. To access space search function, use the left navigation bar → *Space* button, as shown below:



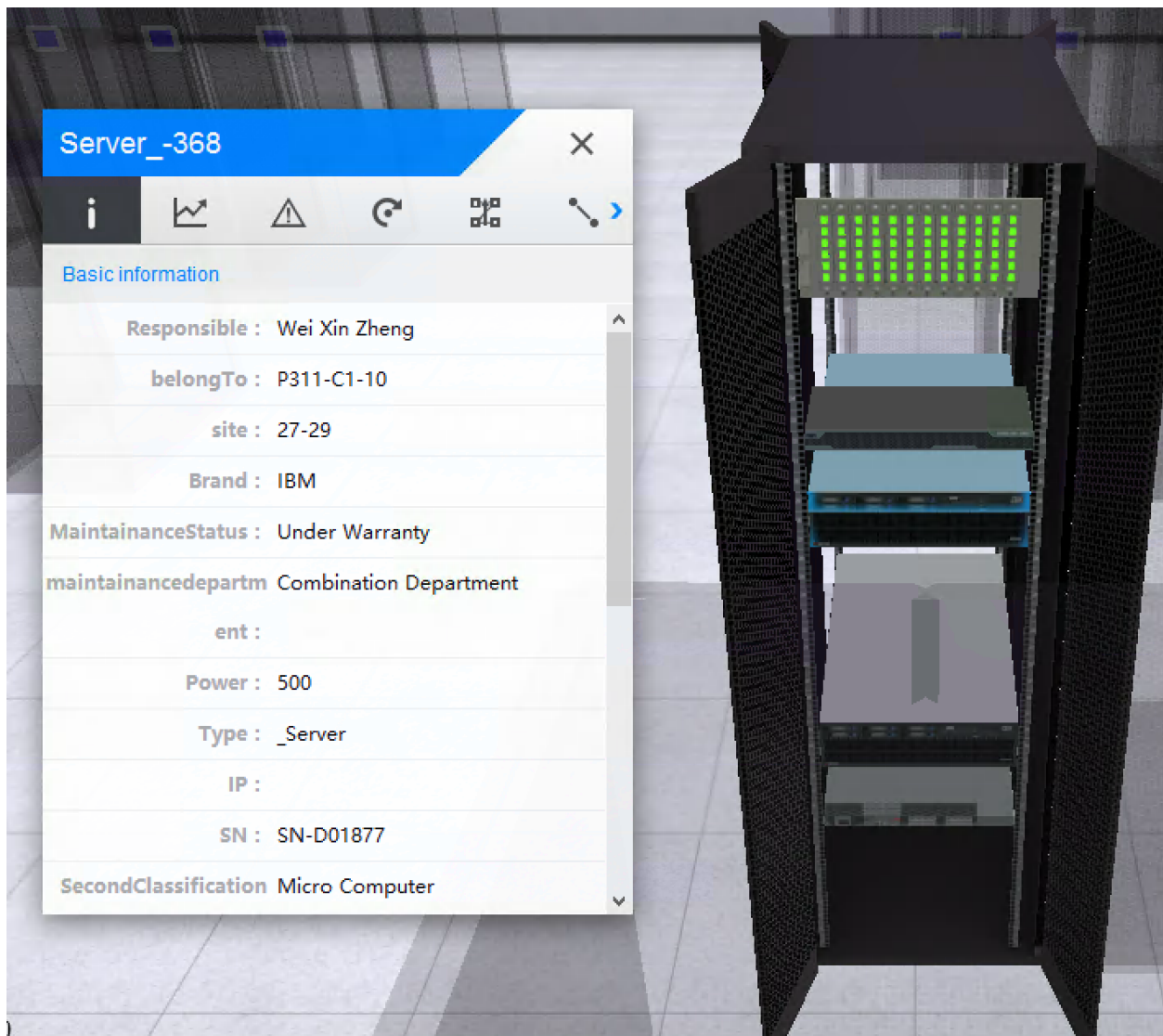
The screenshot shows the uinnova application interface. At the top is the uinnova logo. On the left is a dark sidebar with four menu items: 'Search' (magnifying glass icon), 'Device' (three horizontal bars icon), 'Space' (magnifying glass over three horizontal bars icon, highlighted in blue), and 'Demo' (play button icon). The main content area is titled 'Space' with a back arrow icon in the top right. It contains four input fields: 'Location' with a dropdown menu showing 'CN010UINNVOADEMOII1051', 'U High (U)' with the placeholder 'Please enter number of U', 'Power (kW)' with the placeholder 'Please enter remaining available p', and 'Weight (kg)' with the placeholder 'Please enter remaining available lc'. At the bottom of the form are two buttons: a blue 'Search' button and a grey 'Clear' button.

2.5 Device

uDCV supports consolidate and visualize device information in 3D.

2.5.1 Device Information Panel

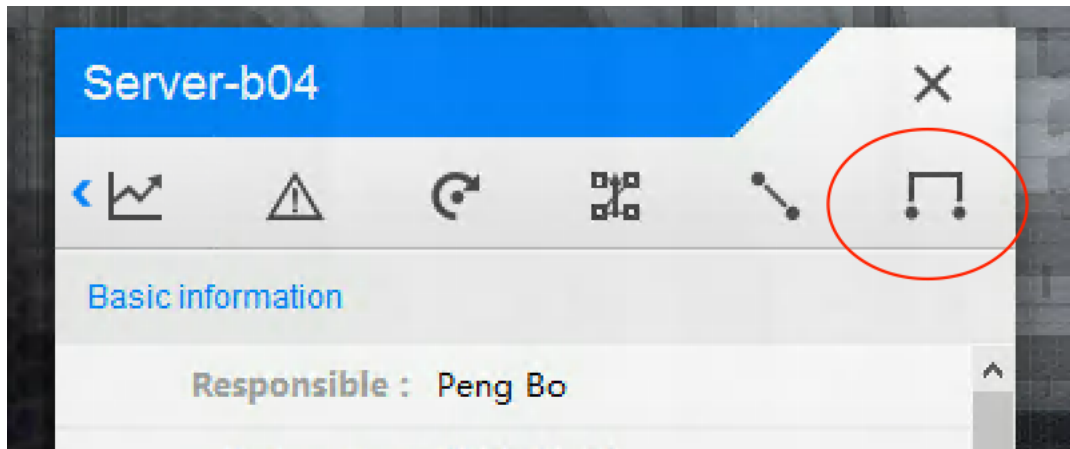
Single click device in a opened cabinet to show device information panel, as shown below:



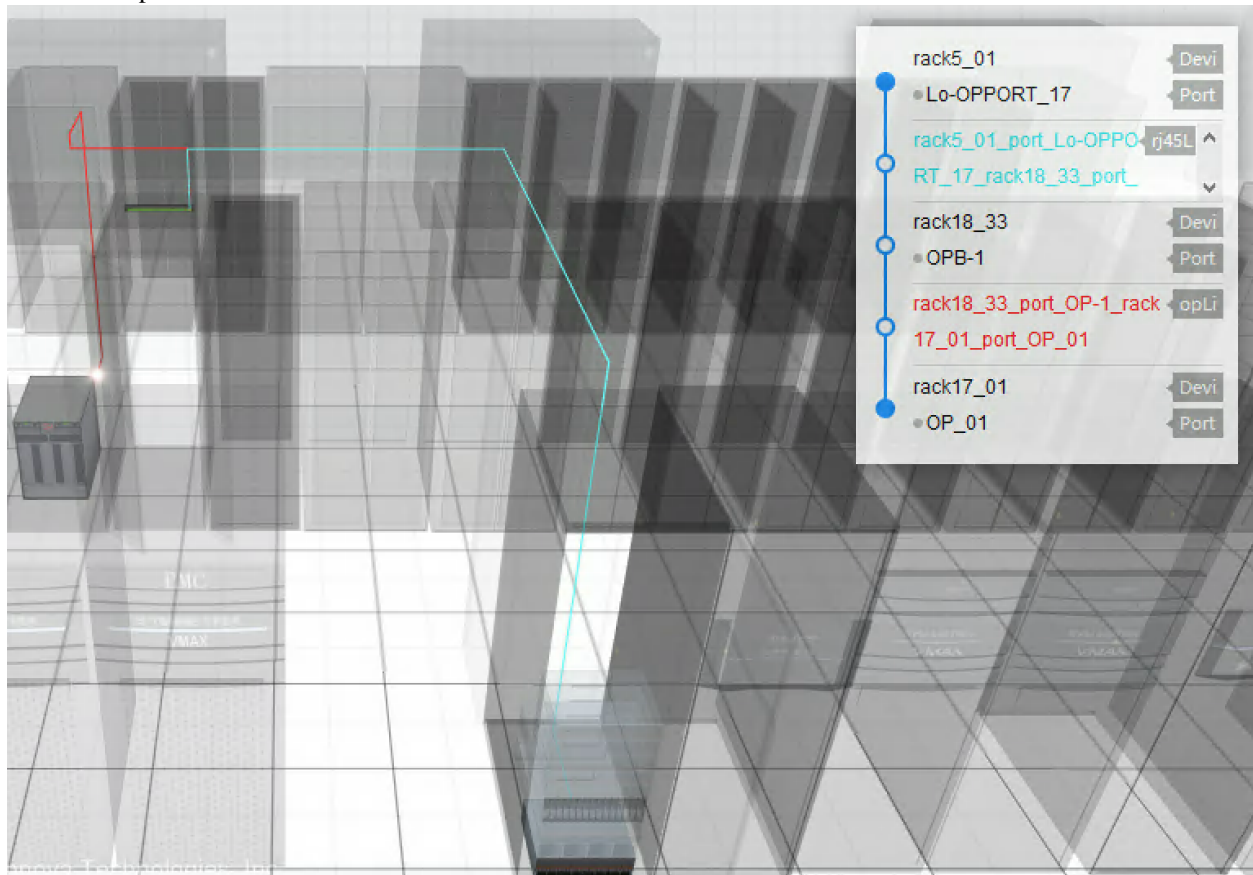
Switch to different tab to view various information about the device.

2.5.2 Wiring Information

Click on [link](#) tab to show device connection (if any).



uDCV supports display linkage as multiple hops, select and fly to peer device/port by click link item on popup link information panel.



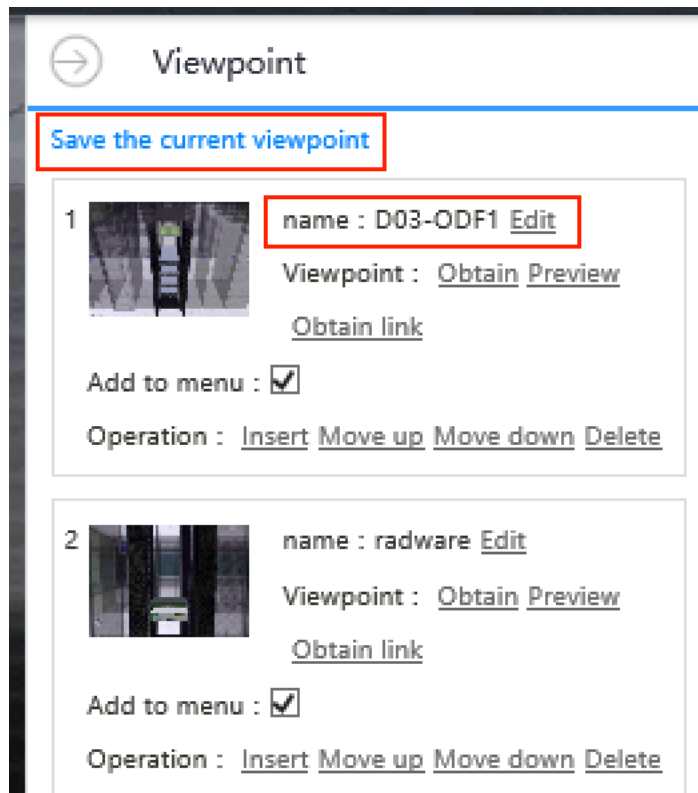
2.6 Viewpoint

2.6.1 Concept

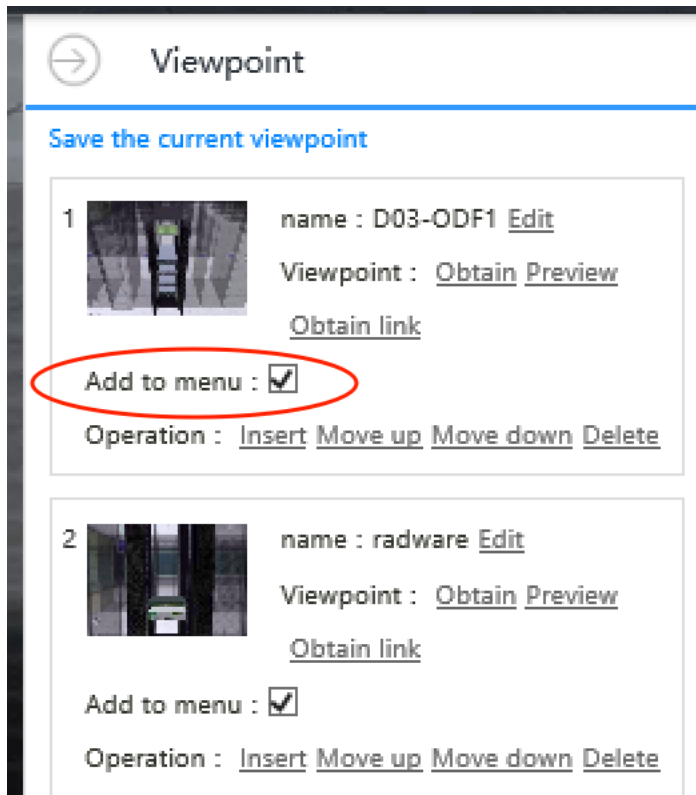
Viewpoint are shortcuts to an specific view of 3D scene. For complex scenes, e.g. multi-stories, multi-rooms datacenter, viewpoint is handy to fly to the point of interest by one single click.

2.6.2 Create Viewpoint

1. Navigate 3D scene to a point of interest.
2. From left navigation bar, click Demo -> View
3. Click Save the current viewpoint

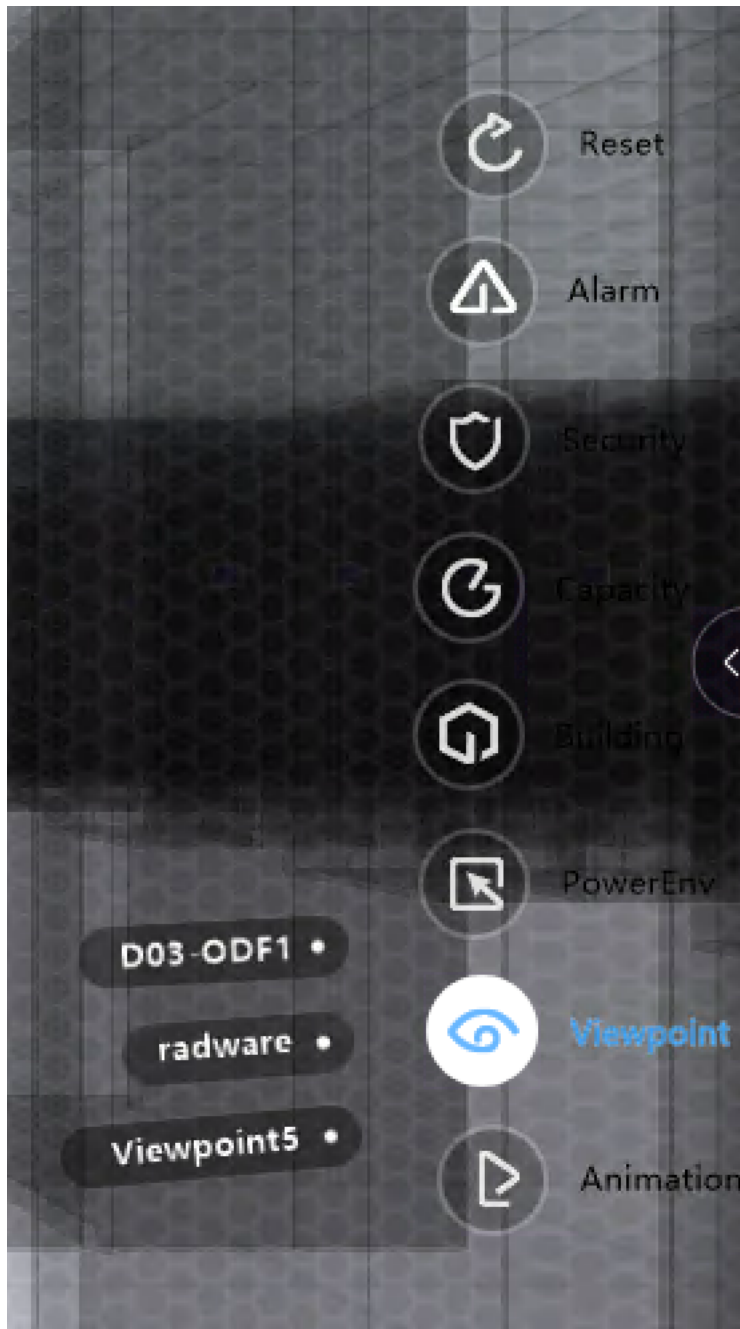


4. Set the name of viewpoint. 6. Click Add to menu check-box.



2.6.3 Access Saved Viewpoint

Mouse over to show right navigation bar, then select Viewpoint → {{name of the viewpoint}}



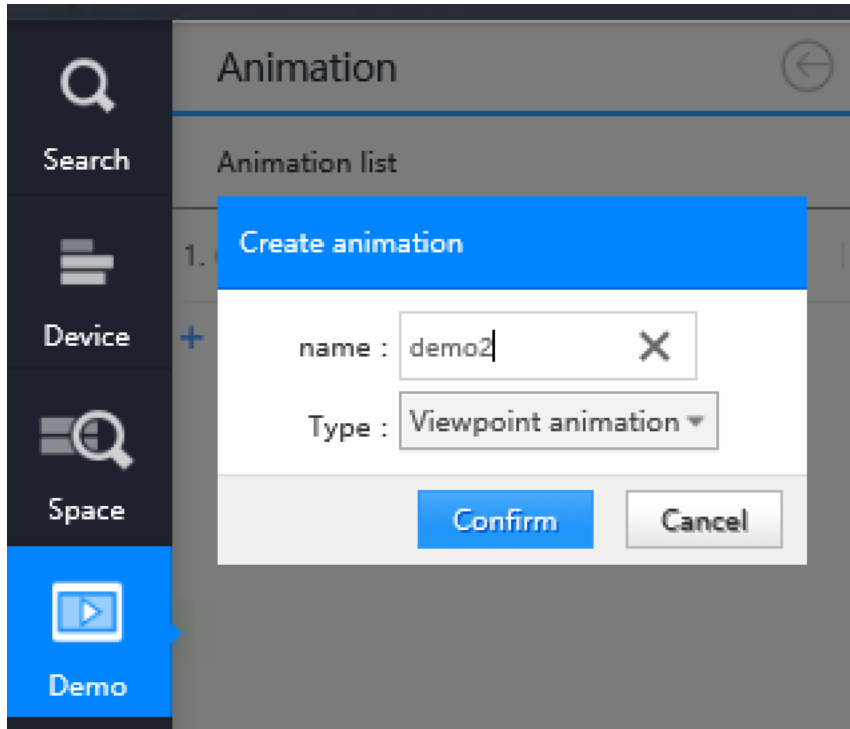
2.7 Animation

2.7.1 Concept

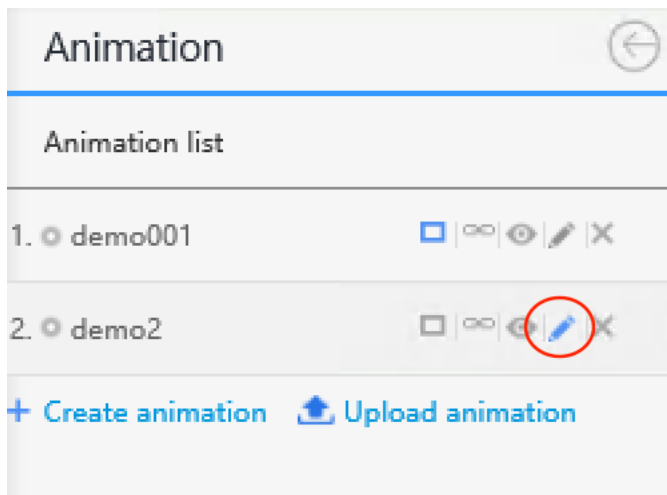
User can define multiple viewpoint in 3D scene, uDCV **connect** those viewpoints automatically and produce an animation.

2.7.2 Create Animation

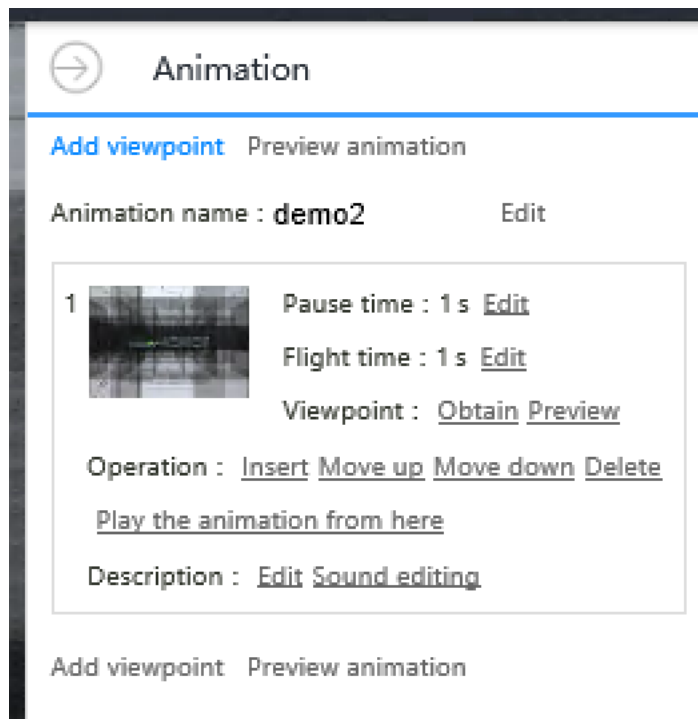
1. From left navigation bar, click Demo -> Animation -> Create animation



2. Click Edit button to enter animation authoring UI



3. Add viewpoints, setting fly and pause parameter, as well as adjust the order of viewpoint **frame** for current animation.



2.7.3 Preview Animation

Click `preview animation` to preview current animation.

 Animation

Add viewpoint Preview animation

Animation name : **demo2** Edit

1

Pause time : 3 s [Edit](#)
Flight time : 1 s [Edit](#)
Viewpoint : [Obtain](#) [Preview](#)
Operation : [Insert](#) [Move up](#) [Move down](#) [Delete](#)
[Play the animation from here](#)
Description : [Edit](#) [Sound editing](#)

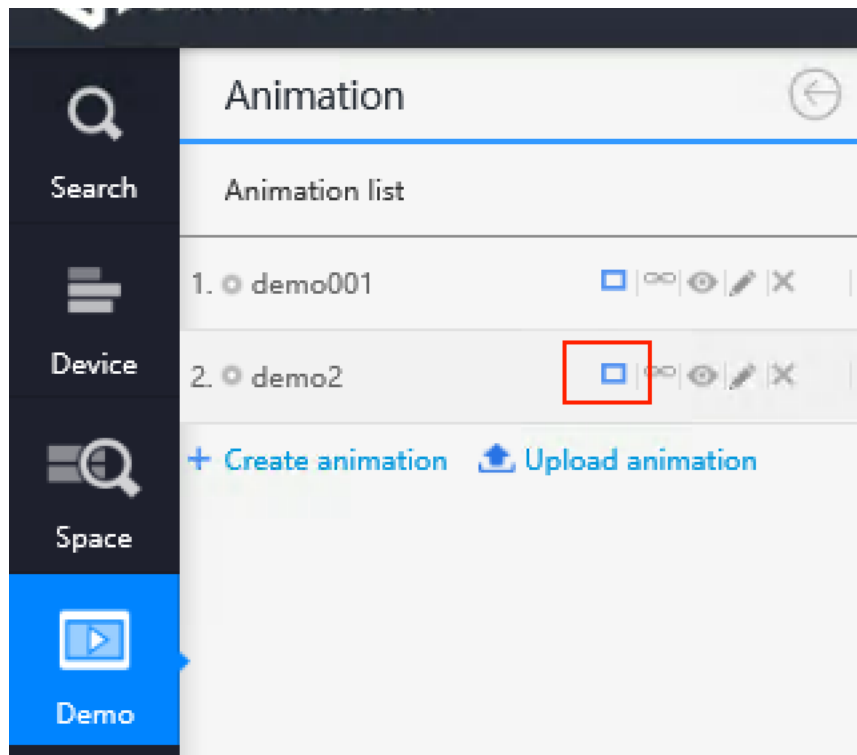
2

Pause time : 1 s [Edit](#)
Flight time : 1 s [Edit](#)
Viewpoint : [Obtain](#) [Preview](#)
Operation : [Insert](#) [Move up](#) [Move down](#) [Delete](#)
[Play the animation from here](#)
Description : [Edit](#) [Sound editing](#)

Add viewpoint [Preview animation](#)

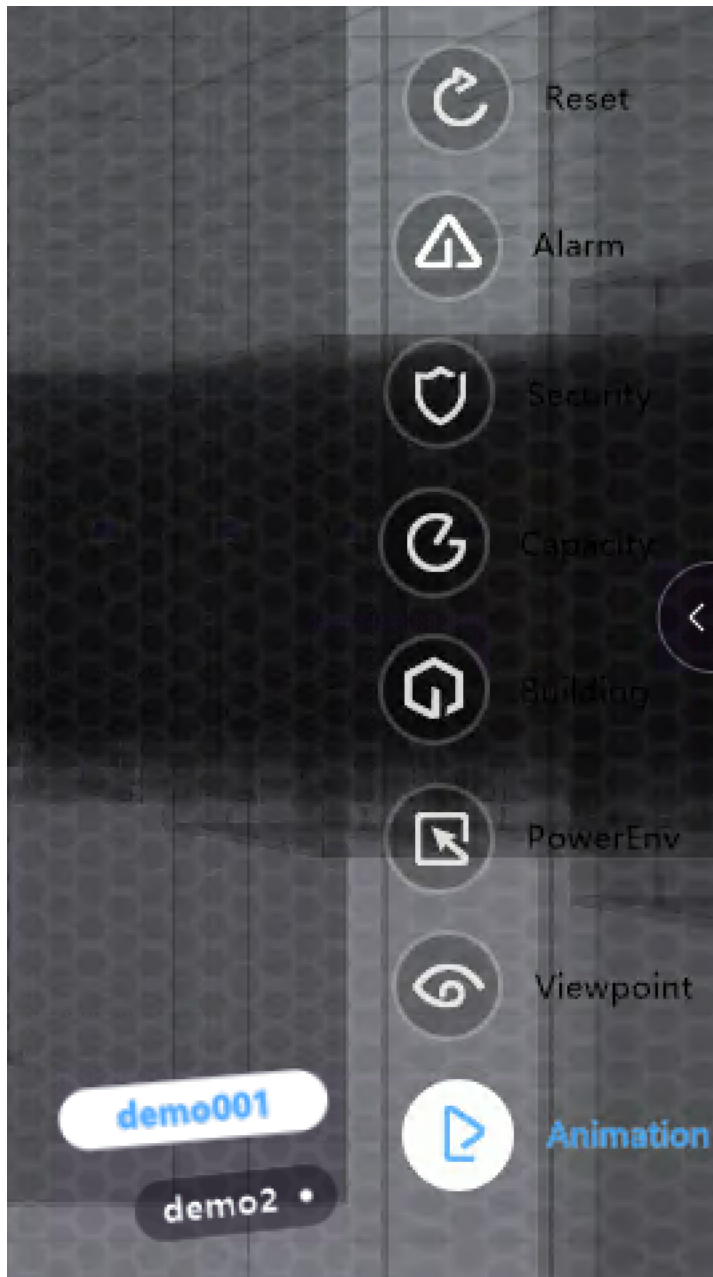
2.7.4 Set as Default Animation

From animation list, click `set as default animation` button to set animation as default animation. Default animation can be play directly from top right navigation bar.



2.7.5 Play Animation

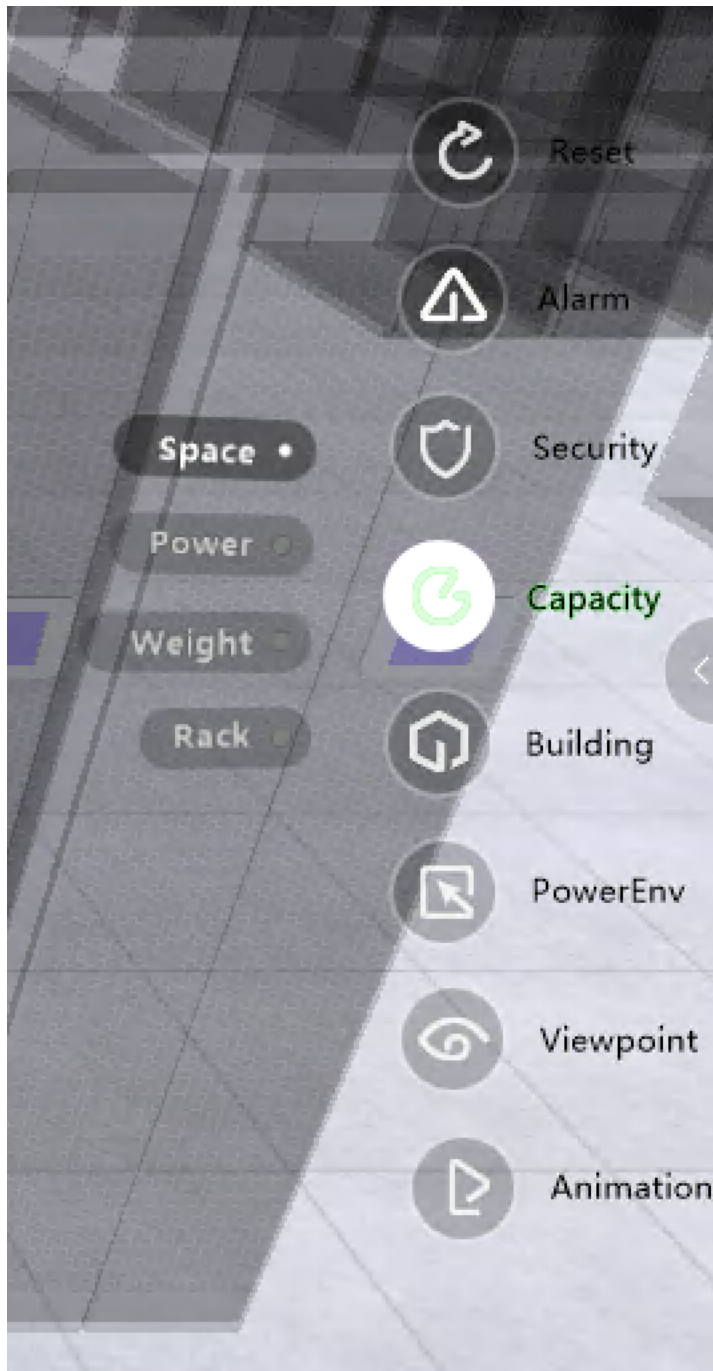
- Play **Default** animation by click `Animation` button on the top right navigation bar
- Select animation to play by mouse over right navigation bar, then select `Animation -> {{name of the animation}}`



2.8 Analysis

2.8.1 Overview

uDCV provides various analysis functions which can be accessed by mouse over right navigation bar.



Note: Certain analysis functions only available in specific layer(s), for instance, *Electronic Wire* only available on building layer.

2.8.2 Analysis Functions

uDCV provides following analysis functions:

Table 2.4: Analysis Functions

Function Category	Description
Reset	Reset all analysis effects
Alarm	Alarm filter
Security	Identify security devices by category
Capacity	Capacity analysis on space, power, etc.
Building	Show building level objects
PowerEnv	Environment related analysis functions such as heatmap, airflow, sensors, etc.
Viewpoint	Viewpoint shortcuts
Animation	animation shortcuts