

Codima Release Notes

11th January 2021

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Introduction

This release contains new functions and new features.

The feature **Enterprise Inventory Explorer** delivers true scalability of deployment and performance. It is based on the concept of an Enterprise View which is edited by the user to create a collection of discoveries. These discoveries can be on the local server or on remote probes anywhere in the world. Local server here refers to where the product is installed.

Enterprise Inventory Explorer combines these discoveries anyway the user chooses and produces analyses-based summation of these discoveries OR shows them individually.

The system can have any number of Probes and be run from any Enterprise View Manager. The software is the same on the Enterprise View Manager and on the Probe.

Critical is that sophisticated filters can be applied to all the discoveries in one click, probes-based discoveries process in parallel time and deliver true scalability. Literally find a needle in unlimited haystacks, all over the site, enterprise or the world – in one click.

Inventory Analytics now supports extra two-level drill down on two Field Matches with graphical support. The Enterprise Inventory Explorer now supports individual graphs per Probe and/or Discovery to see multiple discoveries in separate graphs.

The Web Map Search Facility has now been greatly enhanced.

The Web Maps now supports comparison of maps Historically to show new (extra) and missing devices, between Discoveries.

Inventory Explorer and Asset

Key new Features: -

- Enterprise Inventory Explorer – uses Probes and a new concept **Enterprise Views** to view inventories from any number of probes and discoveries in one GUI. Delivering true scalability of deployment and consistently fast performance. The Enterprise Inventory Explorer supports two view modes, an Additive View plus a Separate Discoveries view. Analytics has been greatly extended to support multiple discovery inventory analysis, with per discovery graphs.
- The Web Map has a new feature, **Compare Historical Maps**, to show extra, and missing devices between Discovery Histories graphically on the maps.
- Explorer Analytics has been extended to allow a two-level drill down on results with matching graph formats.
- The Web Map Search has been greatly upgraded with new intuitive highlights to circle matching nodes. The search is now comprehensive (REGEX, Wildcards etc) and multiple match Blue, Red and Green separate highlights supported.
- An Extra 79 Background Web Maps have been added to the build for use in Inventory Explorer Views and as backgrounds for the Web Maps.

Enterprise Inventory Explorer

Introduction

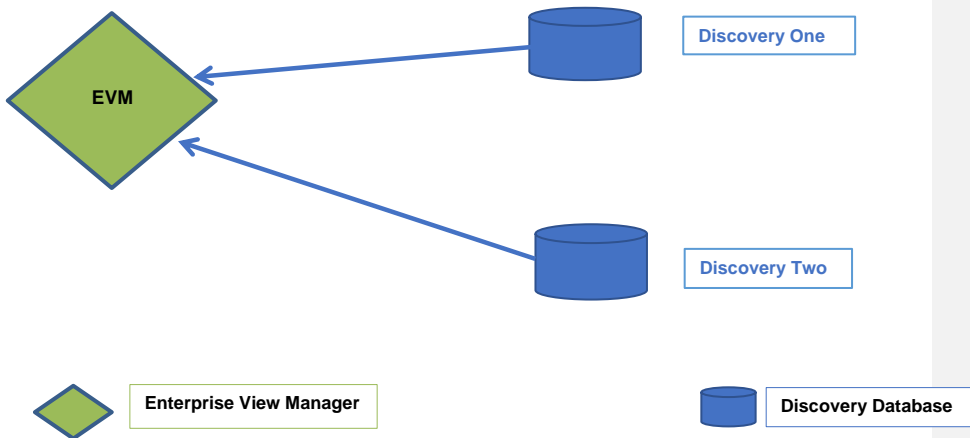
Enterprise Inventory Explorer fully exploits the Distributed Probe architecture to keep bulk data local on the Enterprise View Manager. Another goal of the design was to preserve the inherent ease of use and logical simplicity of the original Inventory Explorer feature.

Information is derived on command by a Enterprise View Manager to simultaneously data mine the raw data on the remote probes. This scales geographical reach, and network topology regions such as independent network domains. It also scales performance by fully distributing the workload required to extract information from the remote Databases. Thereby shrinking both response time and update processing time, in a consistent manner.

The Enterprise View Manager addresses many requirements to combine multiple Discoveries and can speed up processing to dramatically scale the product operation.

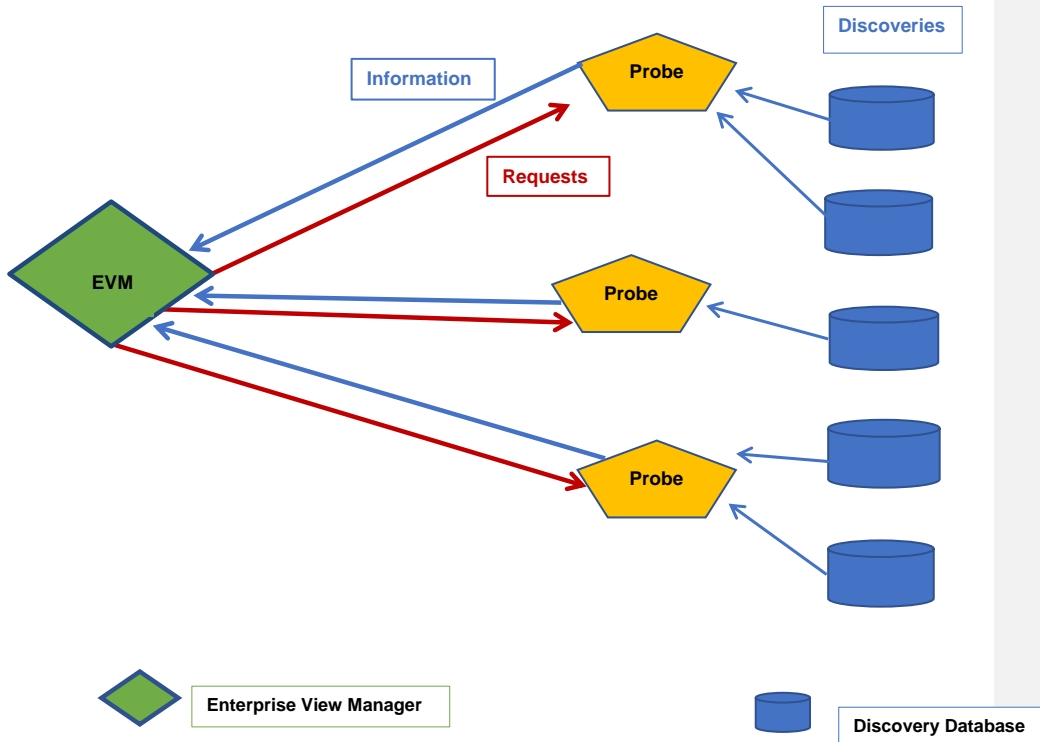
Deployment Scenarios

1/ Combining Discoveries on a Single Installation



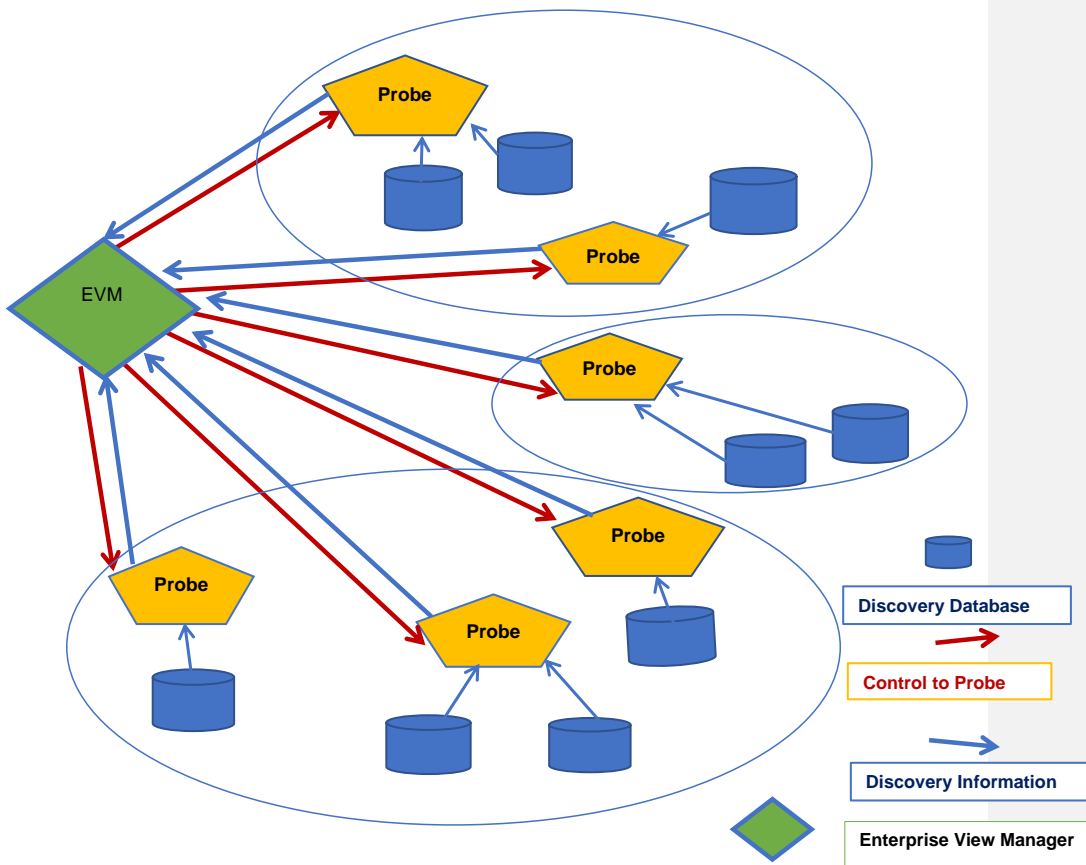
This is a scenario where a single Enterprise View Manager splits up one or more Networks into multiple Discoveries (Databases), possibly to reduce per Discovery time or to limit Database sizes. Alternatively, separate Discoveries are required because the Discoveries use individual IP Ranges, which could be overlapping in which case separate Discoveries are a necessity.

2/ Using Multiple Probes



There are several advantages to using multiple probes. Full parallel processing both during the Network Discovery Process plus equally importantly, the ability to Process Inventory Display Requests, such as a simple or very sophisticated Inventory Explorer Filter to be executed on all Discoveries in the View. There can be any number of Views, with combined or separate reports.

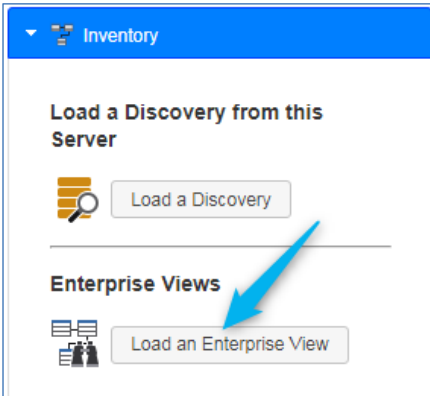
3/ Geographically Distributed Probes and Discoveries



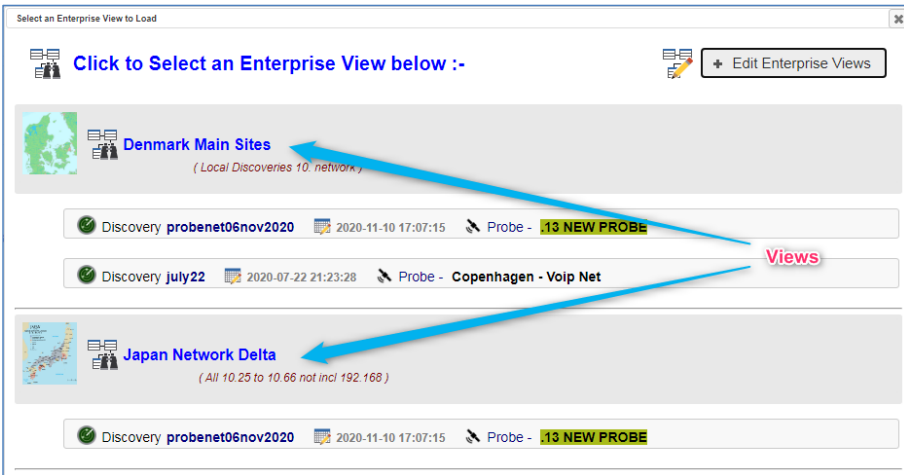
Above is a typical Geographically distributed system. The blue circles represent Views that have been set up in the Enterprise View Manager. The views can focus on a Region, Building or Campus. There can be a highly localised View say of one Building for one User, and perhaps another View for all the Discoveries. Whatever suits, it can be adapted.

Basic Operation GUI

The original Inventory Explorer is retained as can be seen in the picture below by clicking on the **Load a Discovery** button.



A new button **Load an Enterprise View** accesses the new Enterprise Inventory Explorer. Clicking on this button opens the Select Enterprise View user interface as below: -



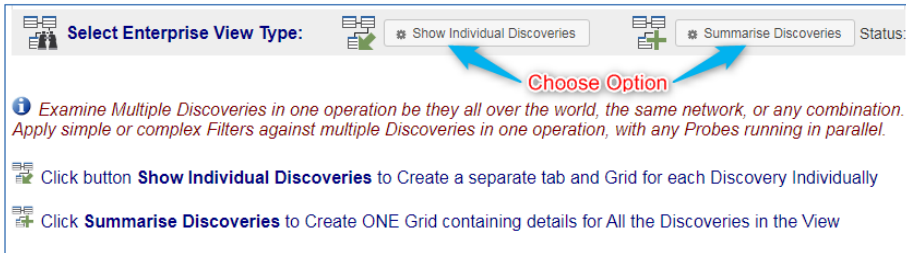
Two Enterprise Views are defined above, 'Denmark Main Sites' and 'Japan Network Delta' with a geographical Map of the two regions. Following the Enterprise View entry are individual Discovery entries. The Discoveries can be on any Remote Probe and/or the local Enterprise View Manager. There is no limit to the number of Views and no limit to the number of Discoveries per View. The Views and Discoveries can be used in ANY combination.

The Selected View controls the user interface Inventory Explorer content by displaying the Discoveries attached to each View. This means that the Probes can work in parallel to deliver multiprobe and multi-Discovery content fully automatically.

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Simply click on the desired View, to get to examine the Discovered Inventories of the selected View.

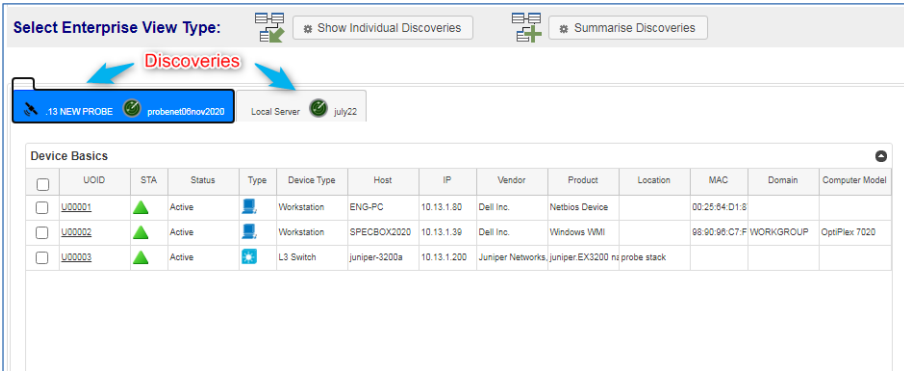
Below is the initial screen after clicking on a View.



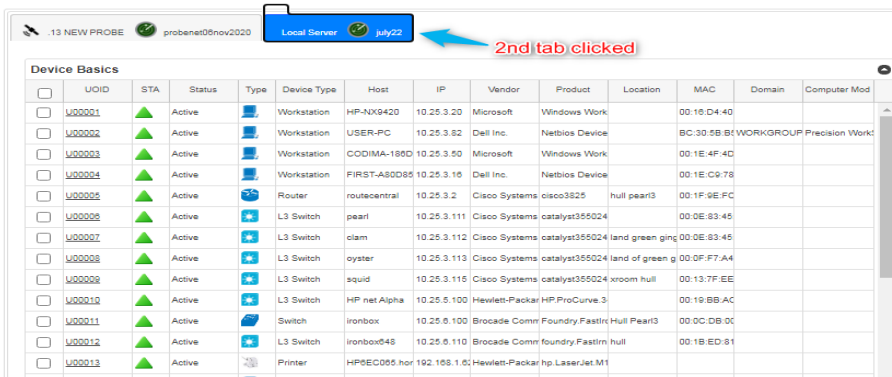
As per instructions, simply click one of the two buttons to kick off the Analysis type, at any time, swap between the modes, at any time.

Individual Discoveries Mode

Clicking on the **Show Individual Discoveries** button, kicks off loading a Grid/Tab per Discovery in the selected View as below. The first tab is a Discovery on a remote Probe.



By clicking on the second tab a Discovery from a local Probe is shown.

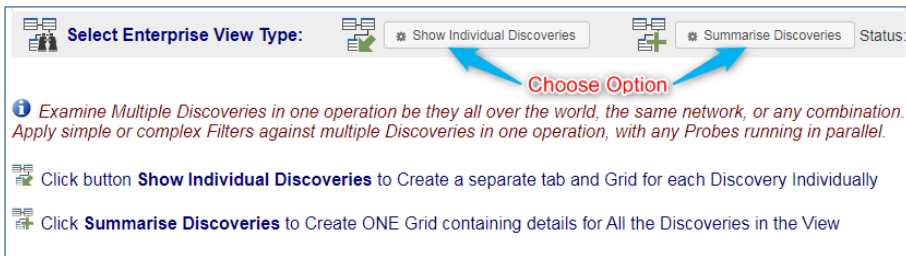


The user created View defines what Discoveries are shown in this feature, there is no upper limit to the number of Views or the number of Discoveries in a View. Discoveries on Probes are processed in parallel by the Probe, making the system totally scalable.

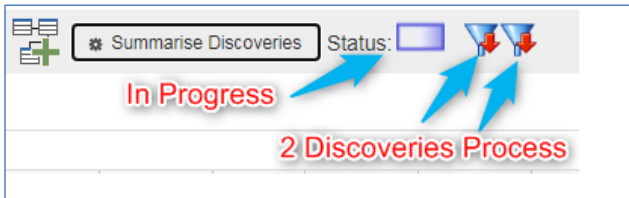
Full Analytics are available per individual Tab, which is one Discovery.

Discoveries Summary Mode

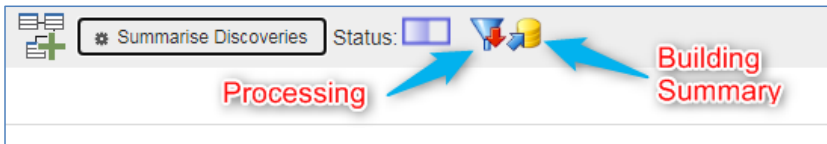
Clicking on the **Summarise Discoveries** button, kicks off creating a combined analysis of all the Discoveries in the View.



Since this is a complex process involving Discoveries from Distributed Probes and Local Systems, status indicators show progress per Discovery.



Above two Discoveries are Processing extracting the requested details and apply potentially complex filters.



Above the 2nd Discovery is now building the Combined DBase of all the Discoveries. The first Discovery is still processing.



The job is done successfully, both discoveries are processed and combined.

There is now a single Grid which shows the results of the two discoveries in this example.

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UCID	STA	Status	Type	Device Type	Host	IP	Vendor	Product	Location	MAC	Domain	Computer Model	Probe	Prb Loc	Discovery
U000001	0			Workstation	HP-N04420	10.25.3.20	Microsoft	Windows Worksta		00:16:D4:4D:8: null	null		Local Server	Server	july22
U000001	0			Workstation	ENG-PC	10.25.1.80	Dell Inc.	Netbios Device		00:25:04:D1:5: null	null		13 NEW PROBE	dev room	probenet06nov2020
U000002	0			Workstation	USER-PC	10.25.3.82	Dell Inc.	Netbios Device		8C:30:5B:85:1: WORKGROUP		Precision WorkSt	Local Server	Server	july22
U000002	0			Workstation	SPECBOX2020	10.15.1.56	Dell Inc.	Windows WMI		98:20:96:C7:F: WORKGROUP		OptiPlex 7020	13 NEW PROBE	dev room	probenet06nov2020
U000003	0			Workstation	CODMA-18ED3G	10.25.3.50	Microsoft	Windows Worksta		00:1E:4F:4D:7: null	null		Local Server	Server	july22
U000003	0			L3 Switch	Juniper-3202a	10.15.1.200	Juniper Networks	Juniper EX3200 na probe stack		null	null		13 NEW PROBE	dev room	probenet06nov2020
U000004	0			Workstation	FIRST-AB00820	10.25.3.16	Dell Inc.	Netbios Device		00:1E:C9:78:5: null	null		Local Server	Server	july22
U000005	0			Router	routecentral	10.25.3.2	Cisco Systems	cisco3825	hull peer3	00:1F:0E:FC:7: null	null		Local Server	Server	july22
U000006	0			L3 Switch	peer1	10.25.3.111	Cisco Systems	catalyst55024PV		00:0E:83:45:81: null	null		Local Server	Server	july22

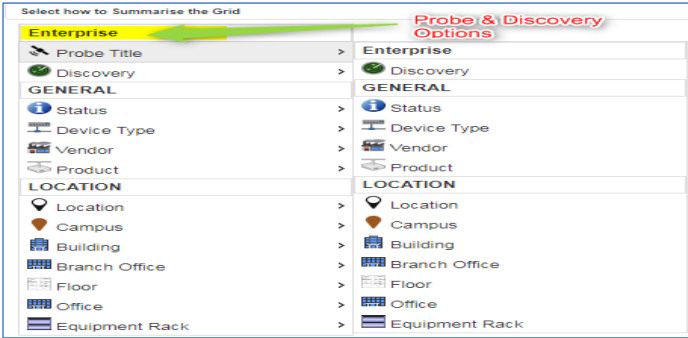
The combined results of the two discoveries are now in one grid. Below there is a zoom in to the Discoveries and Probe columns.

Vendor	Product	Location	MAC	Probe	Prb Loc	Discovery
3.21	Microsoft	Windows Workstation	00:16:D4:4D:8:1B	Local Server	Server	july22
1.81	Dell Inc.	Netbios Device	00:25:04:D1:57:57	13 NEW PROBE	dev room	probenet06nov2020
3.81	Dell Inc.	Netbios Device	8C:30:5B:85:1:1B	Local Server	Server	july22
1.31	Dell Inc.	Windows WMI	98:20:96:C7:FE:5D	13 NEW PROBE	dev room	probenet06nov2020
3.51	Microsoft	Windows Workstation	00:1E:4F:4D:7:10	Local Server	Server	july22
1.21	Juniper Netw	Juniper EX3200 name probe stack		13 NEW PROBE	dev room	probenet06nov2020
3.11	Dell Inc.	Netbios Device	00:1E:C9:78:5E:EF	Local Server	Server	july22

This combined Discoveries grid can now be Sorted, Searched and Exported as normal, showing results from any number of Discoveries, anywhere in the world in one report.

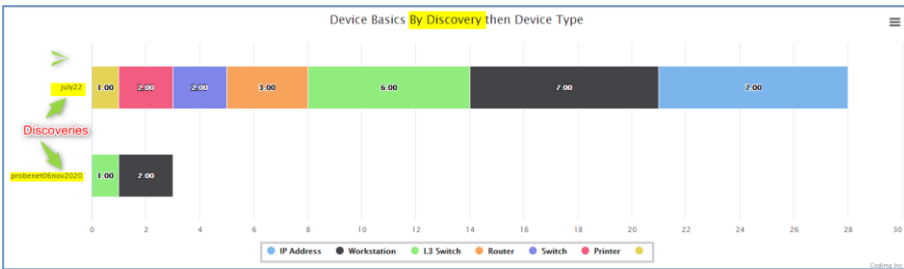
Analytics

For the Summary Mode where discoveries are combined, then new Graphing Options are available.

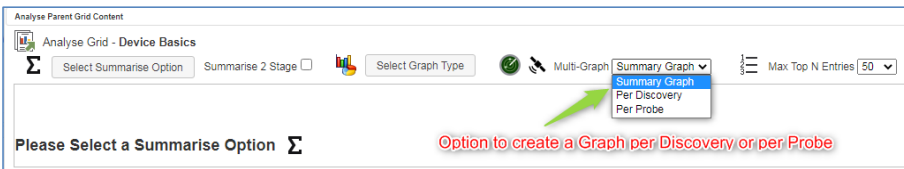


New options are available to compare Discoveries and Probe-Discoveries in one Graph or multiple Graphs.

Below is a single graph showing two Discoveries with counts of Devices Types in each Discovery.

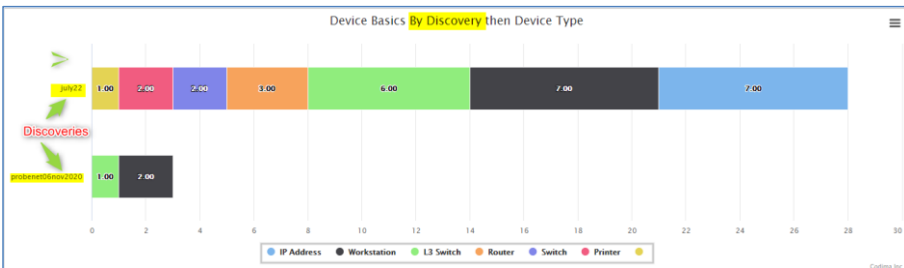
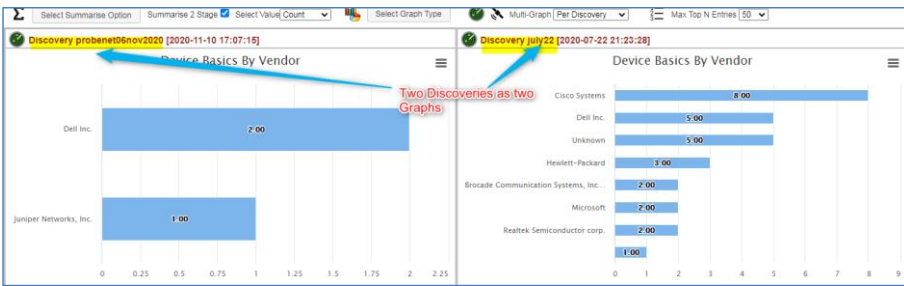
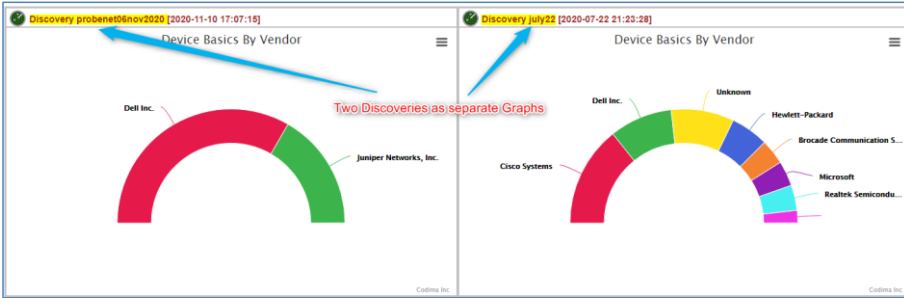


There is an option to create a graph per Discovery or per Probe:



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A multiple Graph option is selected to produce these graphs.



Grid Format can be selected to produce Grids of Multiple Probes and Discoveries (with CSV Export of course). The grid section in yellow is from one Discovery and in green for the other Discovery.

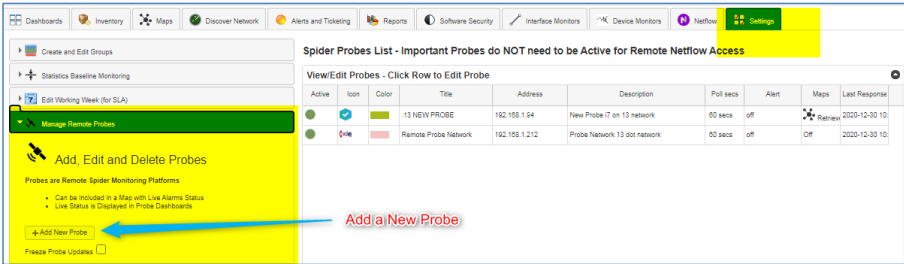
Two Discoveries Summary Grid

Discovery	Device Type	Count
July22	IP Address	1
July22	IP Address	7
July22	L3 Switch	8
July22	Printer	2
July22	Router	3
July22	Switch	2
July22	Workstation	7
probeNet05Nov2020	L3 Switch	1
probeNet05Nov2020	Workstation	2

Creating and Editing Views

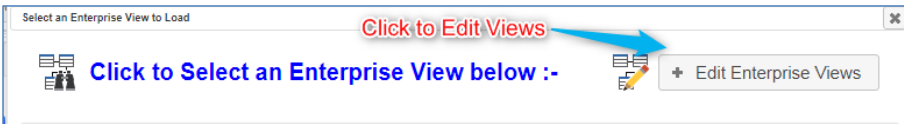
Following a first Product Installation there are no Enterprise Views. These must be created by the User to match their own environment of Network Discoveries. Any number of Views can be added.

Probes can be added under the **Settings Tab** as below. To add new **Probes** only takes a couple of minutes. Good to choose short and concise Probe Titles and meaningful Icons.

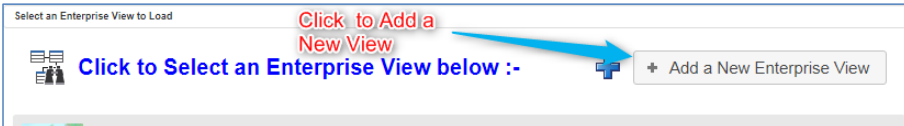


Adding New Views

To add a new View then the View Edit Mode has to be selected by clicking as below:



Now a new View can be added:

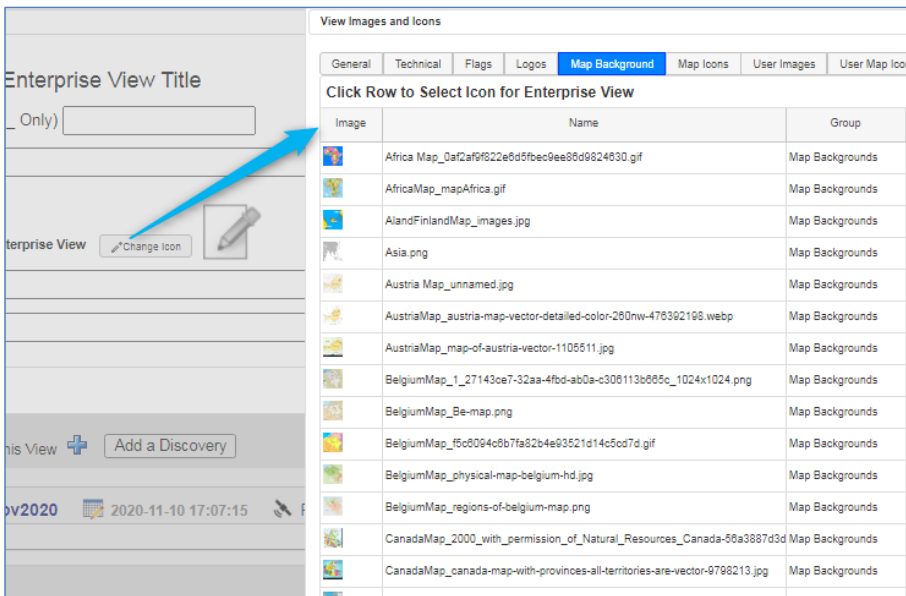


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After clicking **Add a New Enterprise View** a dialog appears to enter the View details.



It is mandatory to enter a unique Enterprise View Title, and highly recommended to add other details especially an Image for the view as below:



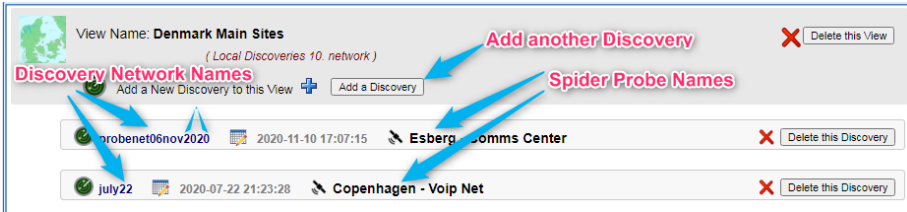
There is a list of maps supplied by Codima, but the user can use their own map images too.

- Commented [C11]:** added map
- Commented [CM2]:** Suggest write map/images. In the graph it says choose Icon should?
- Commented [CI3R2]:** Asked Phil he says it should be images, it says images in the screenshot. But I change this anyway then.

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The next job is to enter Discoveries to each View

A single view is shown below: -



Commented [CM4]: Please remove Spider name in Graph

Commented [CI5R4]: Then Phil will have to redo the screenshot, that will take too long. He suggests to leave as it is. Too late to do any changes to screenshots now. DB is waiting for Manual. If enough time can be changed for web copy, but not now. I have tried using ScreenPresso to remove part of added text but not got it to work.

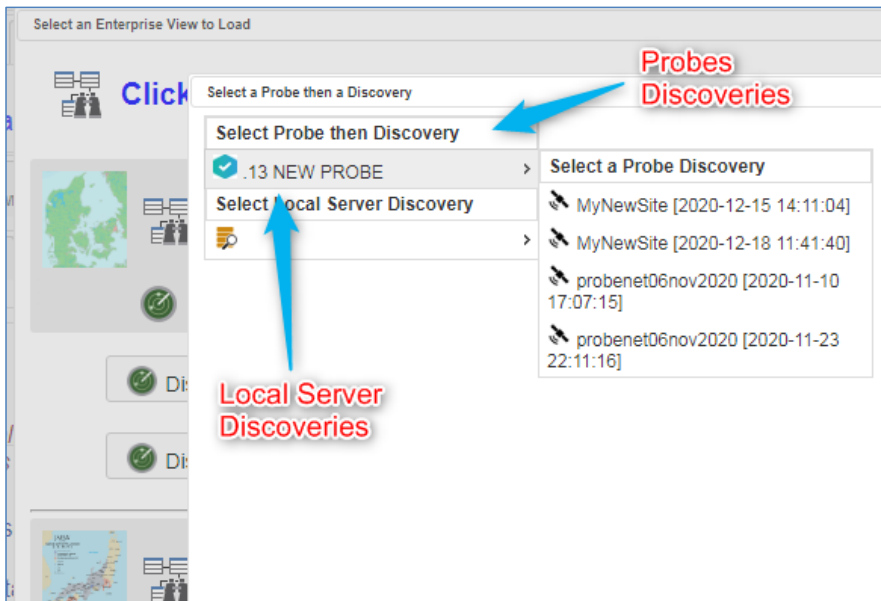
This View has two Discoveries attached which are using two different Probes, in this case. Discoveries can be all on the local Manager, all on Probes, or any combination whatsoever.

Commented [CM6]: All on the Local manager, only on the probes or any combination whatsoever

For example, a view could be used to combine two or more Discoveries on the local Manager, or two or more Discoveries on a Remote Probe, or any combination thereof. This is useful to combine multiple Discoveries from different Subnets on the same network.

Commented [CI7R6]: Phil checked this last night, No change.

Any number of Discoveries can be added to a View by clicking on the Add a Discovery button to launch the GUI below: -



Discoveries can be added from the Local Server Menu list or the Remote Probe Discoveries list – automatically set up by the Manager when it talks to Probes.

Commented [CI8]: added the in front of Manager

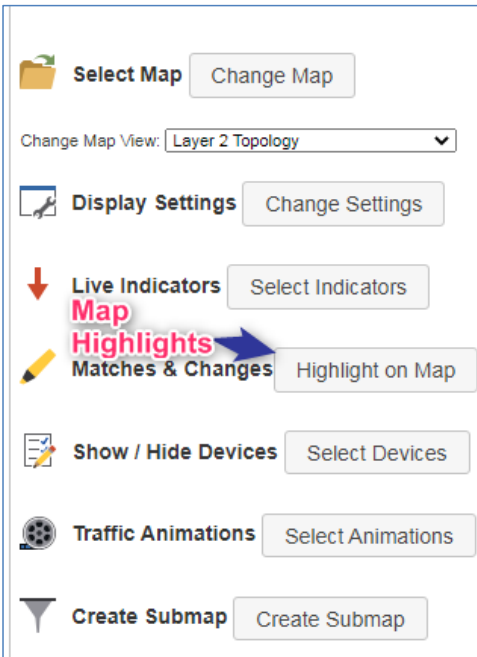
Note: Discoveries are retrieved from Connected Remote Probes when the Browser is Refreshed, they are stored and can then be accessed even when a Probe is no longer connected.

Web Map Highlights

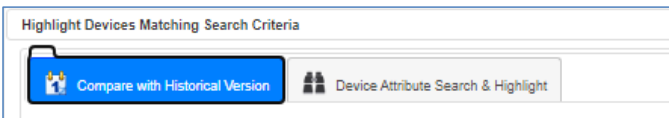
It is a frequent requirement to want to see changes in a map between Historical Discoveries. This has been addressed with in map Device highlights for New Devices and a list of Missing Devices presented as a list.

The Web Map Search and highlight has been greatly upgraded with advanced search options like true wild cards and REGEX. There are now three extra independent highlights offered to show different match classes on the same map.

Both features are accessed through the Web Map main options panel as below:

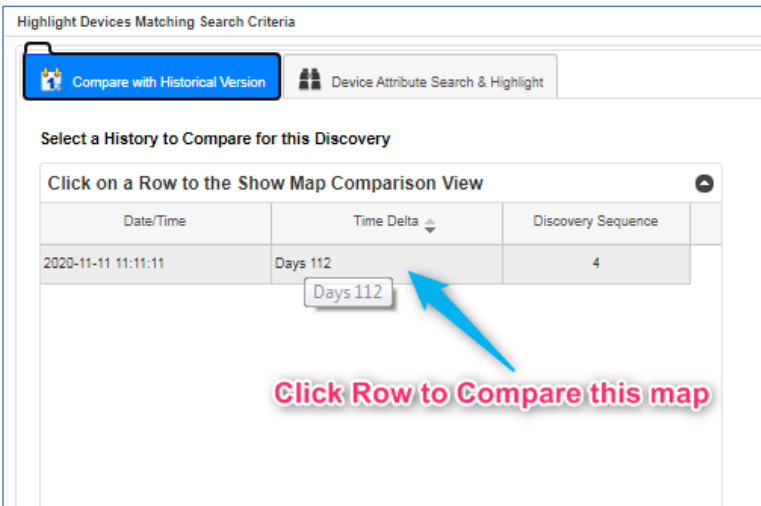


Either Compare Historical Maps or Search for matching nodes which can now be selected using the Tab below:

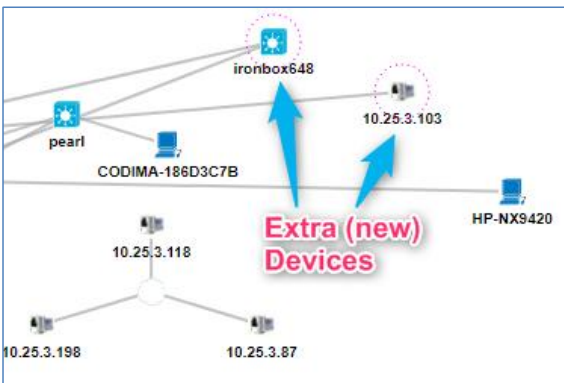


Comparing Historical Maps

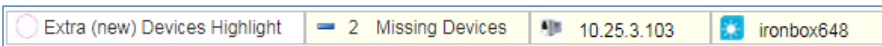
Select the **Compare with Historical Version** tab to get a list of Maps from the SAME DISCOVERY with different Sequence Numbers and Discovery Dates. Now Select a row from the grid.



This other map will be loaded, and then a Comparison Map will be displayed. The New Devices are highlighted with a dotted magenta circle as below:



Additionally, devices that are not present any more are listed above the map.

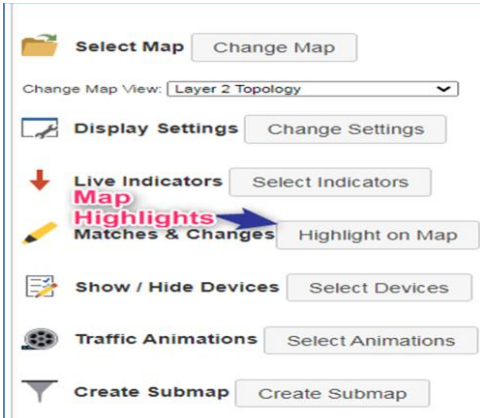


Details are controlled by the Show Device Details under Display Settings in the main map control Panel.

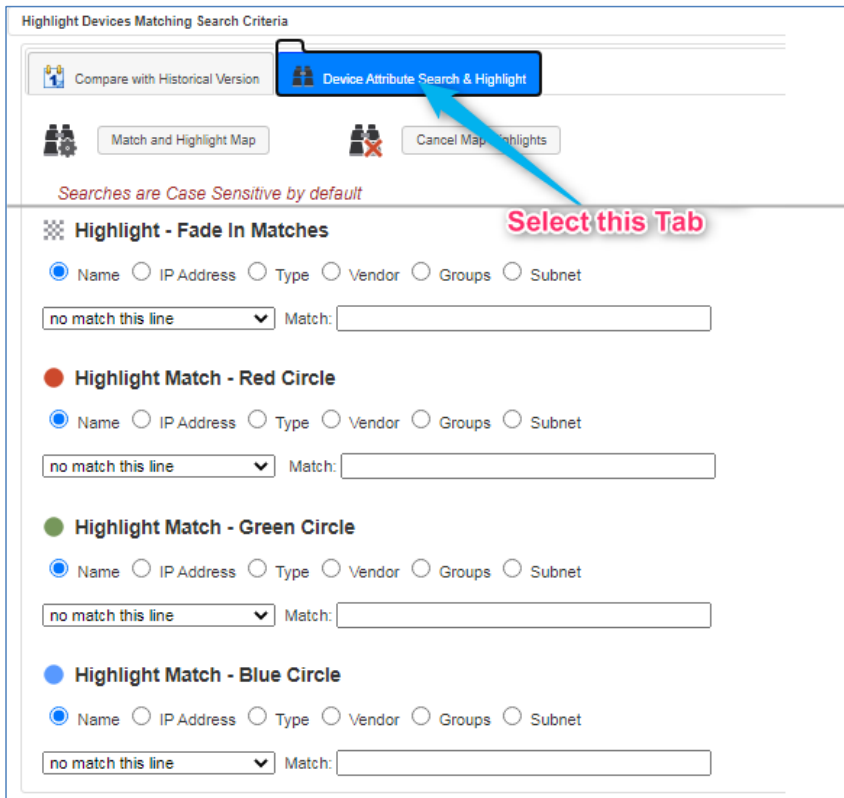


Highlighting Devices using Match Specifications

From the Web Map panel click the Matches & Changes button.



The map search options appear as below.



Multiple searches can be set up at the same time.

Match and Highlight Map Cancel Map Highlights

Searches are Case Sensitive by default

Highlight - Fade In Matches

Name IP Address Type Vendor Groups Subnet

Contains

Highlight Match - Red Circle

Name IP Address Type Vendor Groups Subnet

Does Not Begin With

Highlight Match - Green Circle

Name IP Address Type Vendor Groups Subnet

Contains

Highlight Match - Blue Circle

Name IP Address Type Vendor Groups Subnet

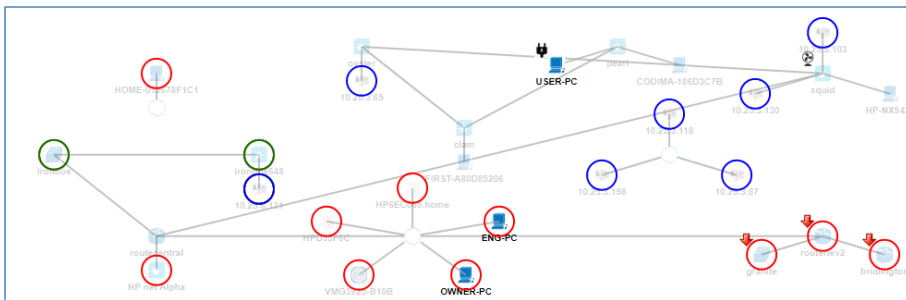
Contains

In the example map below, only devices beginning with 'IP' are **not faded out**.

Devices not in IP prefix '10.25.3' are circled red.

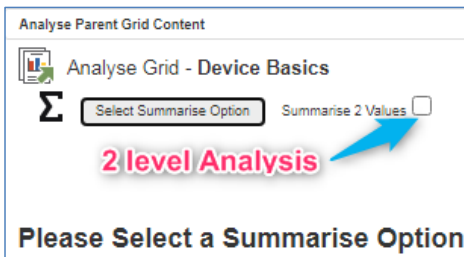
Devices in Subnet '10.25.6' are circled green.

Devices Type 'IP' are circled blue.

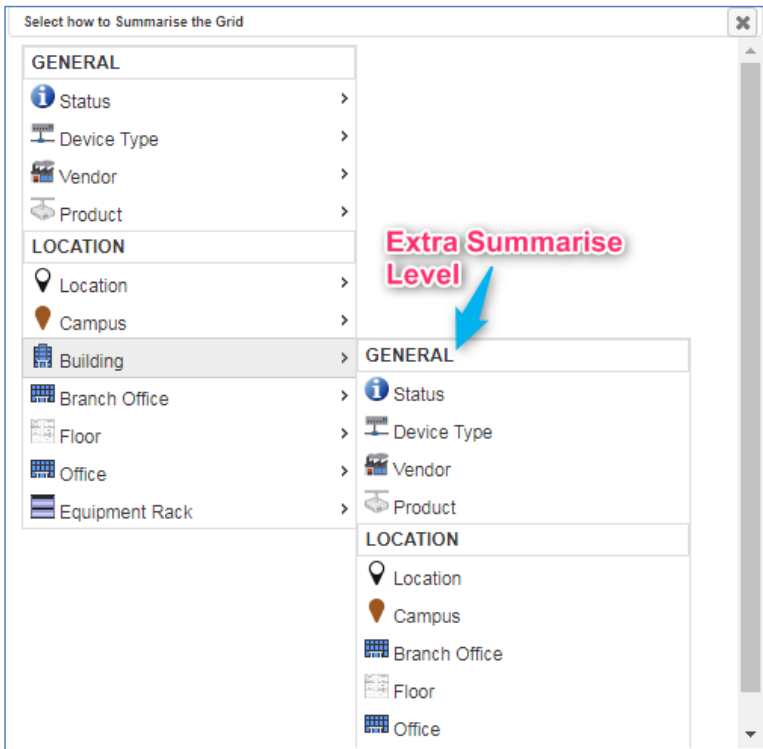


Extended Inventory Explorer Analytics

The ability to Analyse and Summarise discovery information has been extended. By clicking on the tick box below an extra level of analysis is available.

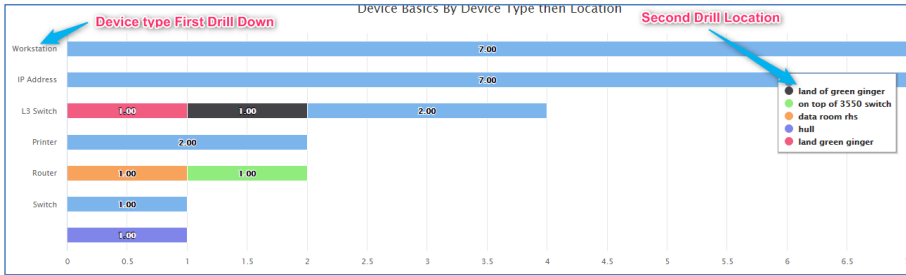


Now when clicking on the Select Summarise Option button a new layer of options appears as below: -

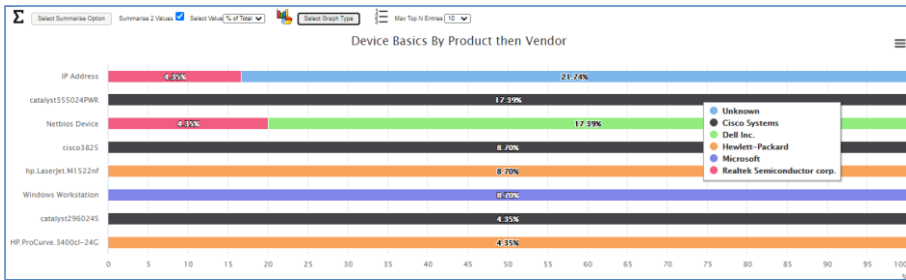


Any combination can be selected (duplicates are automatically removed from the second list).

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A stacked Bar Chart shows two dimensions of the Summarisation, by Device Type then Device Location.



There are numerous options available with all the ITIL and Discovered metrics in any combination.

The two-level analysis can also be displayed as an interactive Grid, that is sortable, filterable and exportable: -

Product	Vendor	Count
		1
catalyst296024S	Cisco Systems	1
catalyst355024PWR	Cisco Systems	4
cisco2951XM	Cisco Systems	1
cisco3825	Cisco Systems	2
foundry.FastIronG5848PPOEs	Brocade Communication Systems, Inc. (previous was Foundry Networks, Inc.)	1
Foundry.FastIron Edge 4802	Brocade Communication Systems, Inc. (previous was Foundry Networks, Inc.)	1
hp.LaserJet.M1522nf	Hewlett-Packard	2
HP.ProCurve.3400cl-24G	Hewlett-Packard	1
IP Address	Dell Inc.	1
IP Address	Realtek Semiconductor corp.	1
IP Address	Unknown	5
Netbios Device	Dell Inc.	4
Netbios Device	Realtek Semiconductor corp.	1
Windows Workstation	Microsoft	2

The order of summarisation can easily be swapped by reversing the First and Second drill selections.