

CODE FROM CONFIGURATION

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Code from Configuration

port_control_reasons:

address: 'Address Allocation Abuse'
copyright: 'Copyright Violation'
dos: 'Denial of Service'
bandwidth: 'Excessive Bandwidth'
polling: 'Excessive Polling of DNS/DHCP/SNMP'
noserv: 'Not In Service'
exploit: 'Remote Exploit Possible'
compromised: 'System Compromised'
other: 'Other'
resolved: 'Issue Resolved'

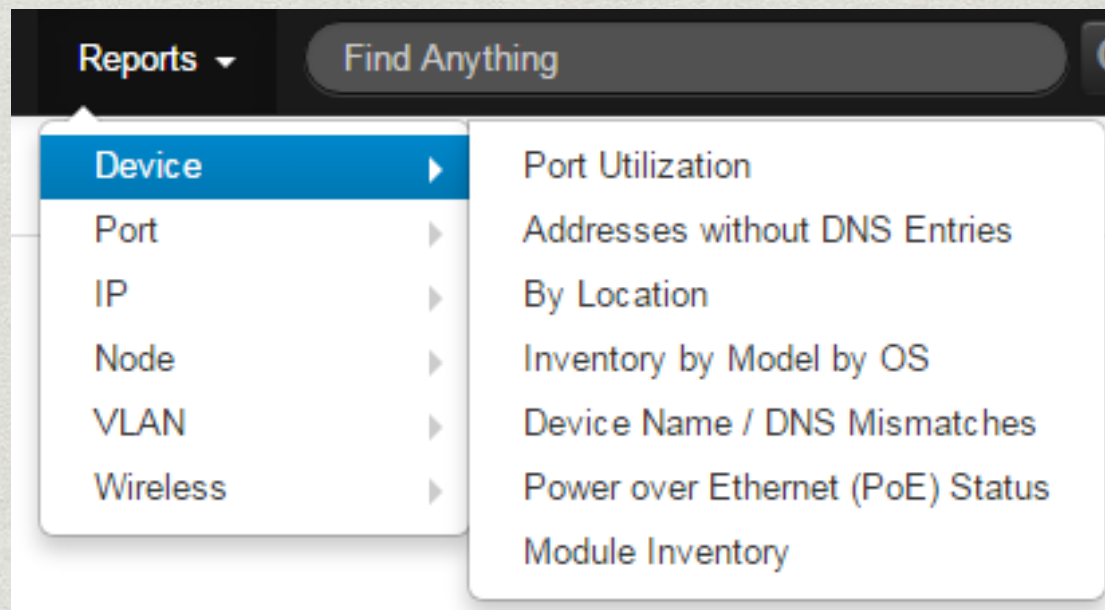
• Please provide a reason for changing the Port Configuration


Other ▼

- Address Allocation Abuse
- Excessive Bandwidth
- System Compromised
- Copyright Violation
- Denial of Service
- Remote Exploit Possible
- Not In Service
- Other**
- Excessive Polling of DNS/DHCP/SNMP
- Issue Resolved

Cancel Continue

Netdisco Reports Feature



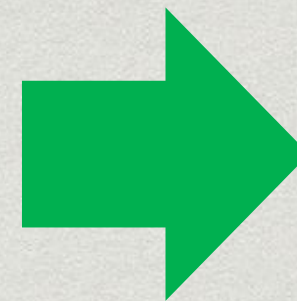
Port Utilization 

Show 10 records. ← Previous 1 Next → Showing 1 to 7 of 7 (filtered from 255 total) 172.

Device ▲	Total Ports ◆	In Use ◆	Shutdown ◆	Free ◆
172.30.255.1	18	7	11	0
172.30.255.13	7	6	1	0
172.30.255.27	14	5	8	1
172.30.255.5	9	6	3	0

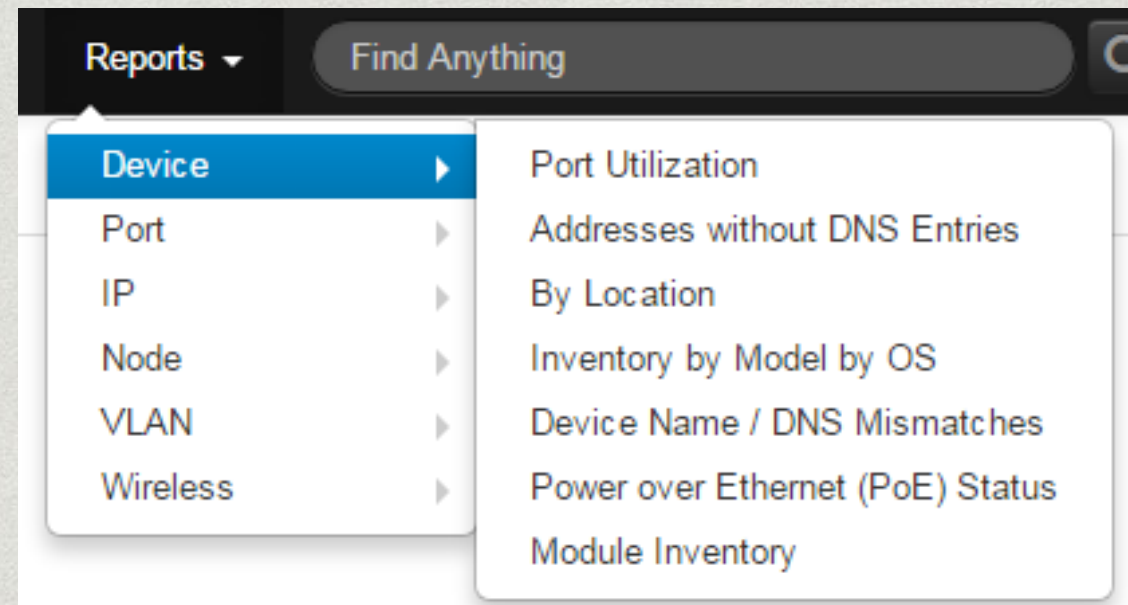
Netdisco Plugins

1. Register menu item
2. Dancer (web) handler
3. Dispatch to Template



Via config?

`App::Netdisco::Web::Plugin::AdminTask::UserLog` in lib/App/Netdisco/
`App::Netdisco::Web::Plugin::AdminTask::Users` in lib/App/Netdisco/We
`App::Netdisco::Web::Plugin::Device::Addresses` in lib/App/Netdisco/W
`App::Netdisco::Web::Plugin::Device::Details` in lib/App/Netdisco/Web/F
`App::Netdisco::Web::Plugin::Device::Modules` in lib/App/Netdisco/Web
`App::Netdisco::Web::Plugin::Device::Neighbors` in lib/App/Netdisco/We
`App::Netdisco::Web::Plugin::Device::Ports` in lib/App/Netdisco/Web/Pl
`App::Netdisco::Web::Plugin::Inventory` in lib/App/Netdisco/Web/Plugin/
`App::Netdisco::Web::Plugin::Report::ApChannelDist` in lib/App/Netdisco
`App::Netdisco::Web::Plugin::Report::ApClients` in lib/App/Netdisco/We
`App::Netdisco::Web::Plugin::Report::ApRadioChannelPower` in lib/App/
`App::Netdisco::Web::Plugin::Report::DeviceAddrNoDNS` in lib/App/Ne
`App::Netdisco::Web::Plugin::Report::DeviceByLocation` in lib/App/Net
`App::Netdisco::Web::Plugin::Report::DeviceDnsMismatch` in lib/App/N



Custom Report Example

reports:

- tag: power_inventory
label: 'Power Supply Inventory'
category: Device
columns:
 - {name: 'Name'}
 - {ps1_type: 'PS1 Type'}
 - {ps1_status: 'PS1 Status'}

query: |
SELECT d.name, d.ps1_type, d.ps1_status
FROM device d
ORDER BY name

Order of Proceedings

1. Register menu item
2. Register Dancer GET handler
3. Execute database query
4. Optionally munge results
5. Dispatch to Template

HEALTH WARNING



Menu and Dancer Handler

```
use App::Netdisco::Web::Plugin;

foreach my $report (@{setting('reports')}) {
    my $r = $report->{tag};

    register_report({
        tag => $r,
        label => $report->{label},
        category => ($report->{category} || 'My Reports'),
        ($report->{hidden} ? (hidden => true) : ()),
        provides_csv => true,
    });

    get "/ajax/content/report/$r" => require_login sub {
        ...
    }
}
```


DBIx::Class Views

```
package App::Netdisco::GenericDB::Result::Virtual::GenericReport;  
use base 'DBIx::Class::Core';
```

```
__PACKAGE__->table_class('DBIx::Class::ResultSource::View');  
__PACKAGE__->table("generic_report");  
__PACKAGE__->result_source_instance->is_virtual(1);  
__PACKAGE__->result_source_instance->view_definition(q{});  
1;
```

once

```
my $src= schema($schema)->resultset('Virtual::GenericReport')->result_source;
```

```
$src->view_definition( $report->{query} );
```

```
$src->remove_columns( $src->columns );
```

```
$src->add_columns( map {keys %{$_}} @{$report->{columns}} );
```

***every call
(could be optimized)***

```
my $rs = schema($schema)->resultset('Virtual::GenericReport')->search(undef, {  
    result_class => 'DBIx::Class::ResultClass::HashRefInflator',  
    bind => [map { param($_) } @{$report->{bind_params} }],  
});  
our @data = $rs->all;
```

every call

Safe Compartments

- * Compile and execute code in “restricted compartments”
- * Provides a new namespace, and perl operator masking
- * If in any doubt, **do not use it**
- * Risks include memory, cpu, snooping, signals, external state, etc

```
use Safe;
my $compartment = Safe->new;

our $config = $report; # closure for the config of this report

$compartment->share(qw/$config @data/);
$compartment->permit_only(qw/:default sort/);

my $munger =
    file(($ENV{NETDISCO_HOME} || $ENV{HOME}), 'site_plugins', $r)->stringify;

my @results = ((-f $munger) ? $compartment->rdo( $munger ) : @data);
```


Dancer Dispatch to View

```
if (request->is_ajax) {  
  template 'ajax/report/generic_report.tt',  
    { results => \@results,  
      headings => [map {values %{$_}} @{$report->{columns}}],  
      columns => [map {keys %{$_}} @{$report->{columns}}] };  
}  
else {  
  header( 'Content-Type' => 'text/comma-separated-values' );  
  template 'ajax/report/generic_report_csv.tt',  
    { results => \@results,  
      headings => [map {values %{$_}} @{$report->{columns}}],  
      columns => [map {keys %{$_}} @{$report->{columns}}] };  
}
```


Template::Toolkit

```
<table id="tbl" class="table table-bordered table-condensed table-striped">
  <thead>
    <tr>
      [% FOREACH hdr IN headings %] <th>[% hdr %]</th> [% END %]
    </tr>
  </thead>
  </tbody>
  [% FOREACH row IN results %]
    <tr>
      [% FOREACH col IN columns %] <td>[% row.item(col) %]</td> [% END %]
    </tr>
  [% END %]
</tbody>
</table>

<script>
$(document).ready(function() {
  $('#tbl').dataTable({
    "order": [], [% INCLUDE 'ajax/datatabledefaults.tt' -%]
  });
});
</script>
```


CSV Download

```
[% ELSIF report.provides_csv %]
  <a id="nd_csv-download" href="#" download="netdisco.csv">
    <i id="nd_csv-download-icon"
      class="text-info icon-file-text-alt icon-large"
      rel="tooltip" data-placement="left" data-offset="5"
      data-title="Download as CSV">
      </i>
    </a>
[% END %]
```

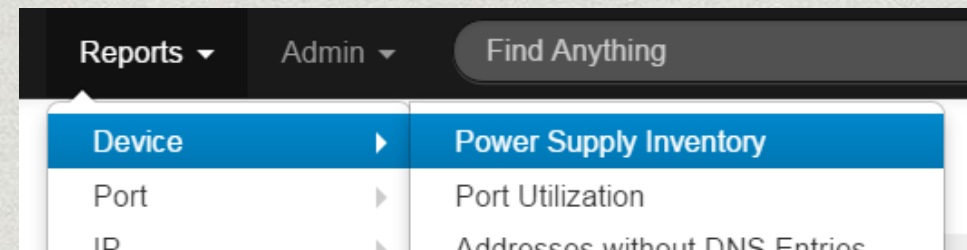
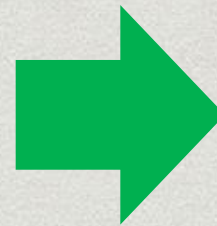
```
[% USE CSV %]
[% CSV.dump(headings) %]

[% FOREACH row IN results %]
  [% mylist = [] %]
  [% FOREACH col IN columns %]
    [% mylist.push(row.item(col)) %]
  [% END %]
  [% CSV.dump(mylist) %]
[% END %]
```


Conclusion

reports:

```
- tag: power_inventory
  label: 'Power Supply Inventory'
  category: Device
  columns:
    - {name: 'Name'}
    - {ps1_type: 'PS1 Type'}
    - {ps1_status: 'PS1 Status'}
  query: |
    SELECT d.name, d.ps1_type, d.ps1_status
    FROM device d
    ORDER BY name
```



← → ↻ ⓘ /report/power_inventory 🔍 ☆ ⚡ 🔴 ABP 🤖

Netdisco Inventory Reports Find Anything 🔍

Power Supply Inventory 📄

Show 10 records. ← Previous 1 2 3 4 5 Next → Showing 1 to 10 of 255 Filter records...

Name	PS1 Type	PS1 Status
APC-SmartUPS-3000VA	UPS status	onLine
APC-SmartUPS-3000VA	UPS status	onLine
switch	other	ok
switch	other	ok
ICCB	Power supply 1 (NA - AC - Regular) present, status ok	normal
ICCB	Power supply 1 (NA - AC - Regular) present, status ok	normal

THANKS!