Exosite

Boot Camp 2015

Subdomain and Client Model Labs
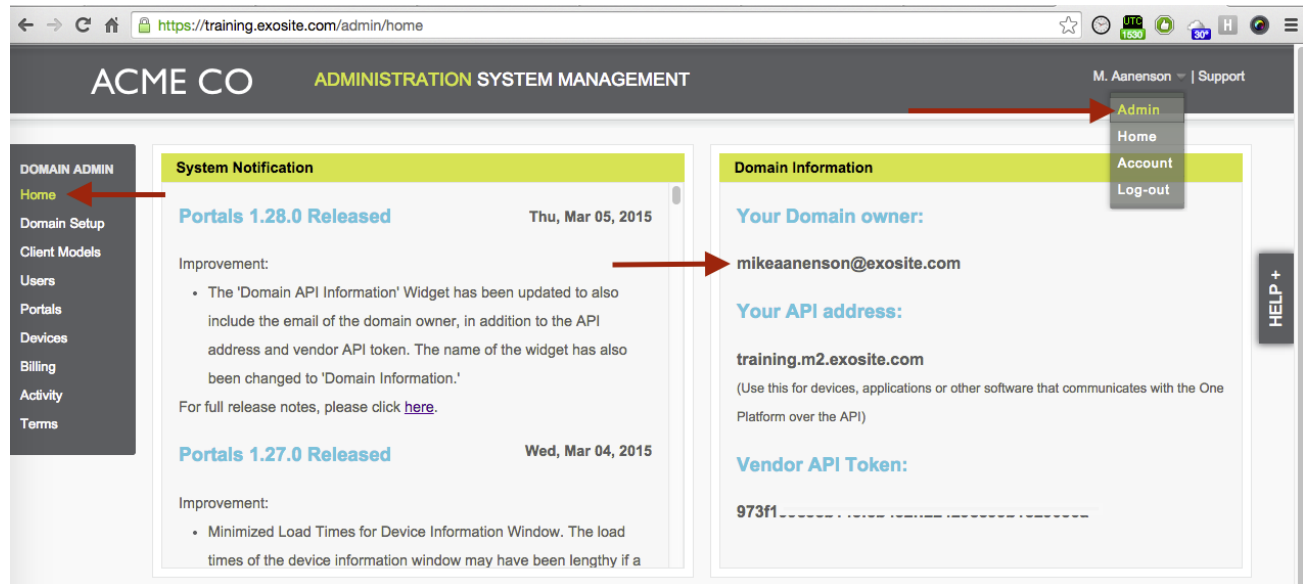
Subdomain and Client Models Labs

Notes:

Lab 0 – Subdomain Home page
<yoursubdomain>.exosite.com/admin

1. When you go to your 'admin' area of your subdomain, the home page has some useful information.

2. Find the Vendor API Token – This is used for Vendor Fleet Management (Provisioning) API calls such as managing client models, posting content, etc.
3. What is your Vendor specific API Address? – This can be used by your devices to access Exosite's APIs (usually are at m2.exosite.com).

**Lab 1 – Create a custom Domain Theme**

<yoursubdomain>.exosite.com/admin/theme

1. Go to your admin area of your subdomain, on the left side menu, click 'Domain Setup' and underneath that, click 'Theme'.
2. You will not see anything listed in your Theme table at first. Let's create a new theme using the 'Add Theme' form.
    a. Theme Name: <whatever you want>
   b. Theme Description <whatever you want>
    c. Click Add.

3. You should now see your theme in the Theme List, you may need to do a page refresh. Click the 'Default' icon which should be red for your theme. It should go to green and now your subdomain is using this theme, which by default is just like the default Portals theme.
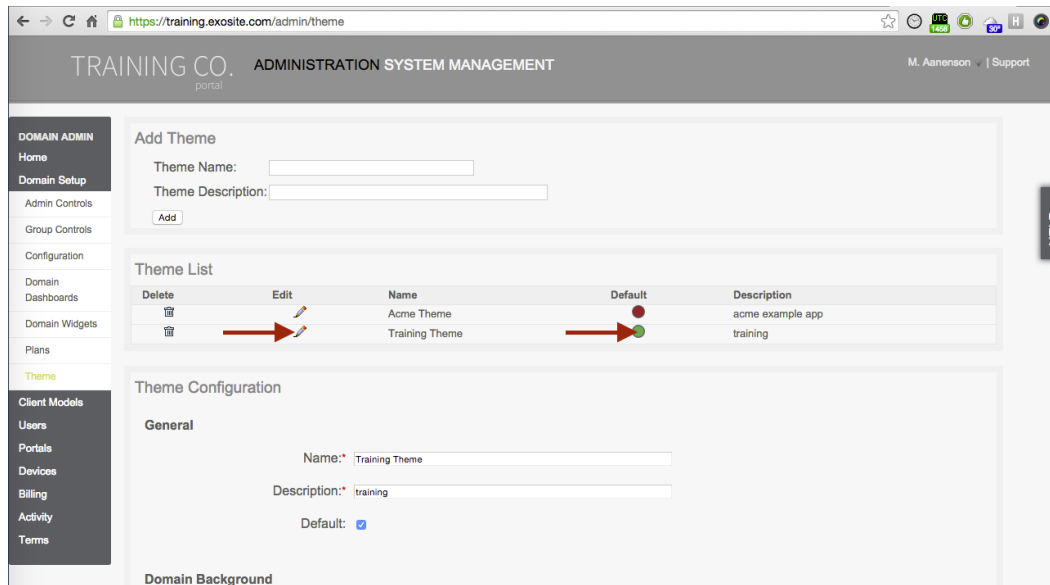
4. Click the edit icon (Pencil graphic) next to your theme to bring up the Theme Configuration box below.
5. Let's start by updating the **Header.**
6. Find the form item that says 'Logo image(300*82px)' and hit the 'Choose File' button. In your Labs code, find the 'subdomain_labs' folder, then the 'theme' folder and then find the image file called **header_logo_image_300x82_dark_text.png**. Use this.
   subdomain_labs/theme/header_logo_image_300x82_dark_text.png
7. For the form item that says 'Background image(64*82px)', choose the file called '**header_background_image_64x82_light.png**'.
   subdomain_labs/theme/header_background_image_64x82_light.png
8. Under the section called 'Browser Tab', Change the Browser Tab Text to whatever you want to call your subdomain (keep it short).
9. Under that same section, find 'Browser tab icon' and click 'Choose File' to upload the file called '**browser_tab_favicon_image_50x50.png**'.
10. Scroll down and click 'Submit' to update your theme.
11. Did you see these changes?
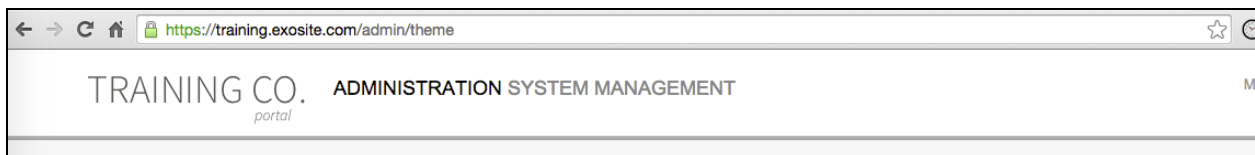
12. Change the Header text colors to make them show up more clear on a white background.
13. Change the Widget colors and other colors to match your company's color scheme.
14. Can you upload your own logo image for your company? It needs to be **300x82.** Recommend using a transparent png for the logo so that the header background appears behind it.

Header

Logo image(300*82px): [Choose File] No file chosen

TRAINING CO.
portal

[remove image]

Background image(64*82px): [Choose File] No file chosen

[remove image]

Title color: `070803`

Sub title color: `878787`

Title and Subtitle vertical position: `1.375em`

Navigation link color: `969696`

Navigation link rollover color: `3B3B3B`

Navigation drop-down text color: `FFFFFF`

Navigation link vertical position: `1.5em`

Portal menu current item color: `2C7D5F`

Footer

Tagline text: `ANY DEVICE. ANY DATA. ANY WHERE.`

Tagline text color: `474747`

Footer bar color: `474747`

Link text color: `5C5D60`

Link text rollover color: `000000`

Lab 2 - Custom CSS

With the custom themes, advanced HTML/CSS users can edit their custom CSS.
Let's change the widget blocks to not have a border and change the title block.

1. Go to you Admin / Domain Setup / Theme page.
2. On the Theme List table, click the edit button next to your theme you want to edit, making sure it is selected as the default (green icon).
3. Go way to the bottom where you will see a box called 'User-defined CSS rules'. Fill in the following CSS code there and hit the 'Submit' button at the bottom.

```
div.block {
background-color: #F0F0F0;
border: 0px solid #e5e6e6;
padding: .5em;
}

div.block div.blockcontent div.content {
border: 0px solid #e5e6e6;
padding: 0 1em;
}

div.block .blockcontent .title {
background-color: #F7F7F7;
padding: 5px 5px;
text-align: left;
font-size: larger;
color: #888888;
font-weight: lighter;
}
```

Custom Code

User-defined CSS rules:
```
div.block {
background-color: #F0F0F0;
border: 0px solid #e5e6e6;
padding: .5em;
}

div.block div.blockcontent div.content {
border: 0px solid #e5e6e6;
padding: 0 1em;
}

div.block .blockcontent .title {
background-color: #F7F7F7;
padding: 5px 5px;
text-align: left;
font-size: larger;
color: #888888;
font-weight: lighter;
}
```

4. Notice any differences?

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Lab 3 – Create a Portal to keep dashboard and device clones
To create domain dashboard (custom pages) in Exosite Portals, it is a good idea to create a portal dedicated for this that the admins have access to for this purpose.

1. Click on the 'Portals' item in the Domain Admin Menu (left side) and then click 'Portal List'.
2. Add the top you should have a form called 'Add Portal'. We will use this to create this dedicated portal for domain admins.
3. Fill in the following:
    a. Portal Name: 'VENDOR CLONES
    b. Portal Owner: <Pick yourself>
    c. Portal Plan: <You should have a plan call **Domain Developer Plan** with a balance of 1··· these are included with a new subdomain>
    d. Portal Description: 'This portal is for domain admins to keep clone dashboards and clone devices'
    e. Click 'Add and Charge Domain'. (If you have a balance, this will subtract from that)

4. In the Portal List below, you should now have a portal called 'VENDOR CLONES. Click this, which will take you to that Portal.

TIP:
If you need to invite others to help contribute to your subdomain (other admins), this is a good portal to invite them to as managers. Then on the Admin / Domain Setup / Admin Controls page you can add them as an admin to your subdomain.

TIP:
If you need to create other portals for development and testing, you can follow a similar approach, picking a plan (probably community for example).

**Lab 4 – Create a default home page for your subdomain**
By default, any portal created in your subdomain will use the Exosite generic default custom dashboard. Let's change that.

We will use the 'VENDOR CLONES' portal created in the last step.

1. In your 'VENDOR CLONES' portal, go to the Dashboards page (Menu on the left) and click '**+Add Dashboard**'.
    a. It's name should be '**HOME**'
    b. fill in description as 'default home page', keep the type custom.

2. Now go to that dashboard called 'HOME'. It should be blank.
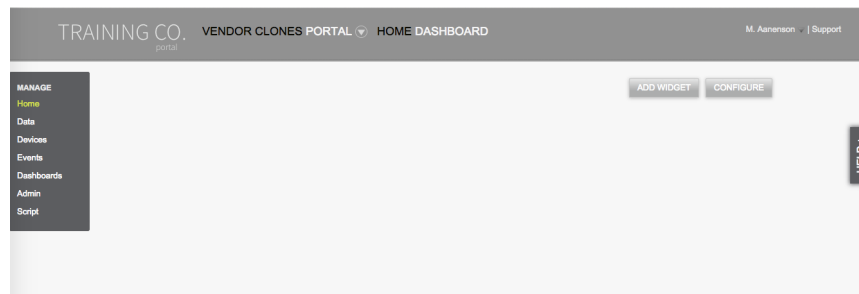
3. Add a '**Text Box**' widget and call it 'WELCOME'.

4. Use the following widget settings:

    a. Width 2, Height 2
    b. In the Message Settings box, put the following text:

Welcome to the Training web portal!

Add Device

    c. Hit the SUBMIT button.

5. You should now see this widget on your dashboard. This is a placeholder really for now until you can put more time into making this page meet your application requirements. (Maybe a fancy device table with a ADD DEVICE button, etc)
6. Let's add one more widget here, this time add a '**Device List**' widget.
7. Use the following widget settings:
    a. Width 2, Height 2
    b. For the '**Click Action**' select '**Launch Portal Dashboard**'
    c. Set the Refresh Rate to 10.
    d. Hit the SUBMIT button.

You should now have a dashboard that looks like this:
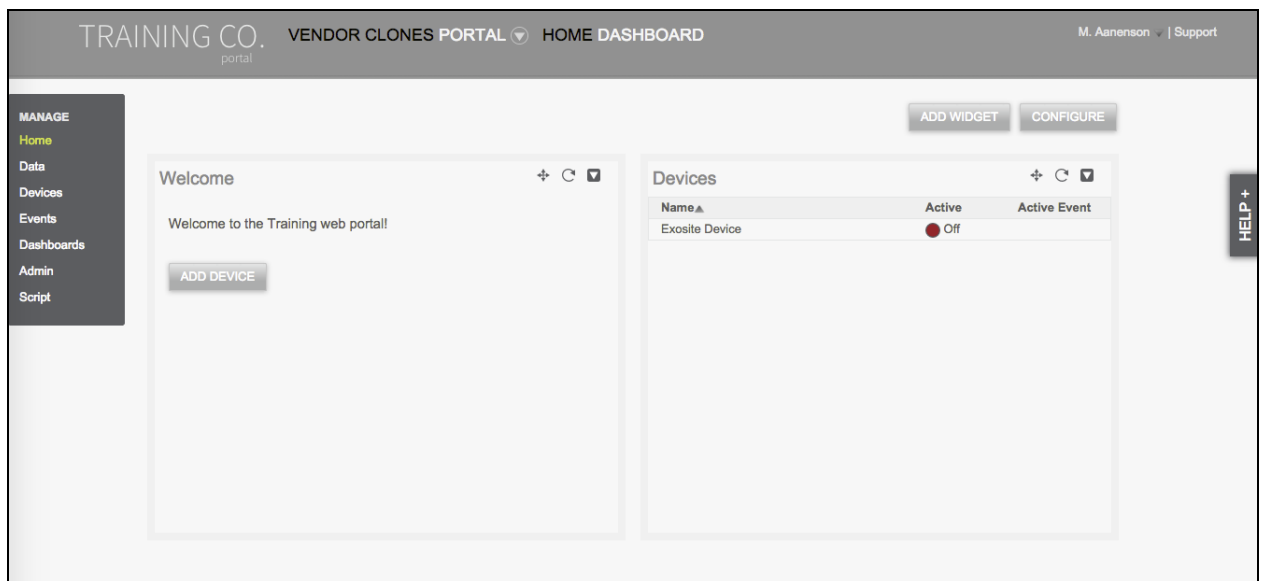
8. Go back to the admin area now and under the Domain Admin menu on the left, under Domain Setup, you'll find a page call 'Domain Dashboards.
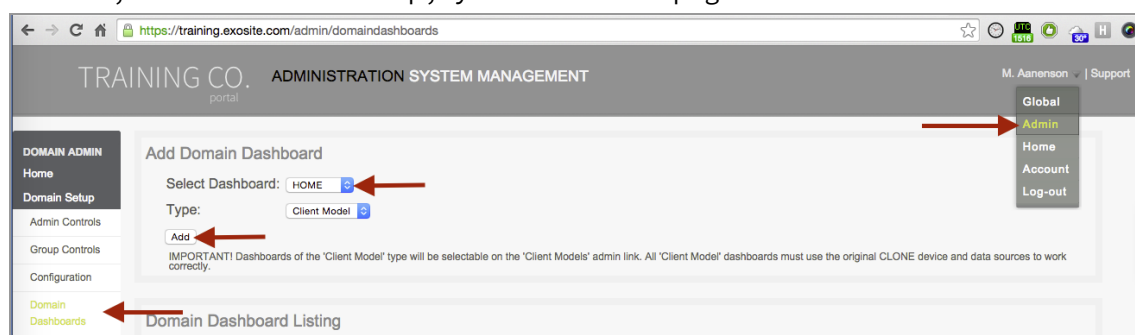
9. In the box at the top called 'Add Domain Dashboard', select your 'HOME' dashboard you just created, which should show up under your VENDOR CLONES portal.

10. Leave the type as 'Client Model' and click the 'Add' button.

11

11. You should now see your dashboard listed under the Domain Dashboard
    Listing table.
12. To apply this to new portals (new user sign-ups), go to your Domain Admin
    menu on the left, click 'Users' and then click the 'New Users' page.
13. Here, you can now select your domain dashboard as the default home page.
    a. Default Dashboard template: <Select your HOME dashboard under
       Domain Dashboards>
    b. Uncheck 'Create Default Device'
    c. Click 'Submit' button.

Now when a new portal is created, that portal's default home page will be this
domain dashboard which you can update (that clone dashboard) and your changes
will apply to all users. You will note that users won't be given the option to
add widgets or change anything on that dashboard, as domain dashboards are not
editable by users.

TIP:
Do not change which domain dashboard is used for this new user default
dashboard setting or any updates you make won't be applied to older users.

Lab 5 – Create another domain dashboard for use by your Client Model
Widgets can call domain dashboards with an RID of a client and the dashboard will use resources from that specific client in it's widgets. In this way, you can create one dashboard for you product's client model and when you go to it, depending on whatever device you called it for, it will that specific device's information.

This domain dashboard will then be used when we create the Client Model in the next Lab.

1. Go to your 'VENDOR CLONES' Portal and get the portal CIK.
    a. This can be found if you go under your username drop-down menu in upper-right, click on Account, then click the 'Portals' Menu item on the left.
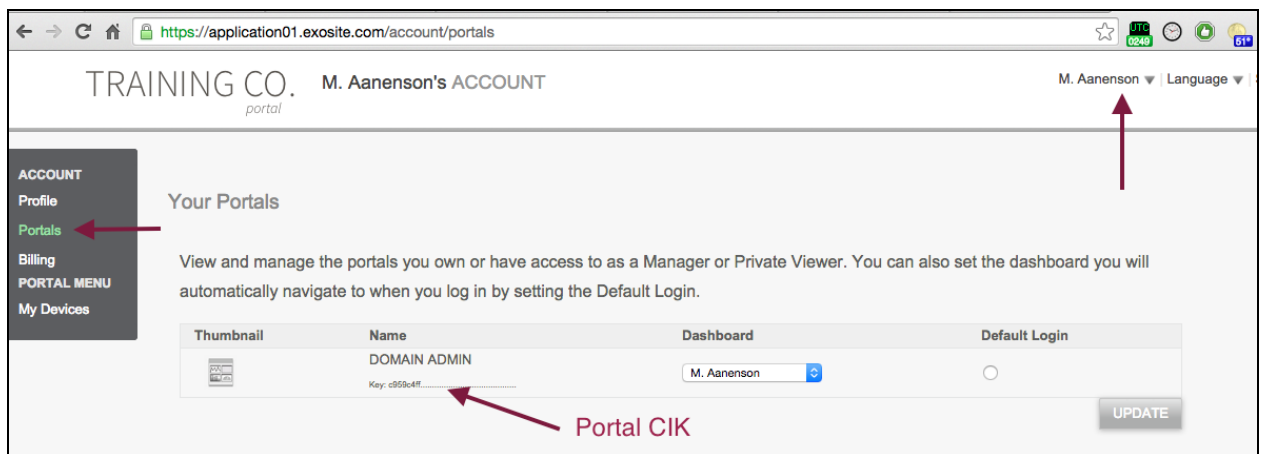
2. To save time, here is a pre-created client CIK you can copy into your VENDOR CLONES Portal. Use your Exoline tool to make a copy in your own portal.
    a. $ exo copy b37bb52fe3f85ddb1166096a5198c394df181e25 <PORTAL CIK>
    b. $ exo portals clearcache <PORATL CIK>
    c. Note: the portals clearcache command will make portals clear it's cache so if you go to your devices page, the device will be there right away.
3. You now have a device (generic type) in your VENDOR CLONES portal. We are going to use this as the CLONE for your new client model. You can verify this by going to this portals 'Devices' page, it should look something like this:

4. In your 'VENDOR CLONES' portal, go to the Dashboards page (Menu on the left) and click '+Add Dashboard'.

a. Give it a name of 'MODEL ONE INTERFACE'
b. Fill in the description ("Client Model One's domain dashboard" for example and keep the 'type' custom.
c. Save this.

Dashboard Setup   ☒

What is a "Dashboard"?

A "Dashboard" is a different way to visualize data from the same Portal.

Some applications may require a "Dashboard" for users and a different "Dashboard" for the maintenance team.

It gives you a way to create different dashboards for the different ways you need to view your data.

Dashboard Name

`MODEL ONE INTERFAC`

Description

`MODEL ONE domain dashboard`

Location

Thumbnail (150px by 100px)

Choose File   No file chosen   Clear (optional)

Template

custom ⬍

Layout

2 columns ⬍

QUIT   SUBMIT

5. Now go to that dashboard called 'MODEL ONE INTERFACE'. It should be blank.
6. Add a 'Text Box' widget and give it a name of just a 'space'. " ".
   a. Width = 4, Height = 1
   b. In the 'Message' box, use the following text, as you can see is HTML code:

```
<div style="text-align: center;">
<h1>DEVICE ONE DASHBOARD</h1>
</div>
```

Block Title: _____
Widget Type: Text Box
Widget Size:
    Width: 4
    Height: 1
Caption Settings:
    Caption: _____
    Font size: 12 pt
    Font color:
        ●Black ○Blue ○Green ○Red
        ○Grey ○Medium Grey ○Light Grey
Message Settings:
    Message:

```
<div style="text-align: center;">
<h1>DEVICE ONE DASHBOARD</h1>
</div>
```
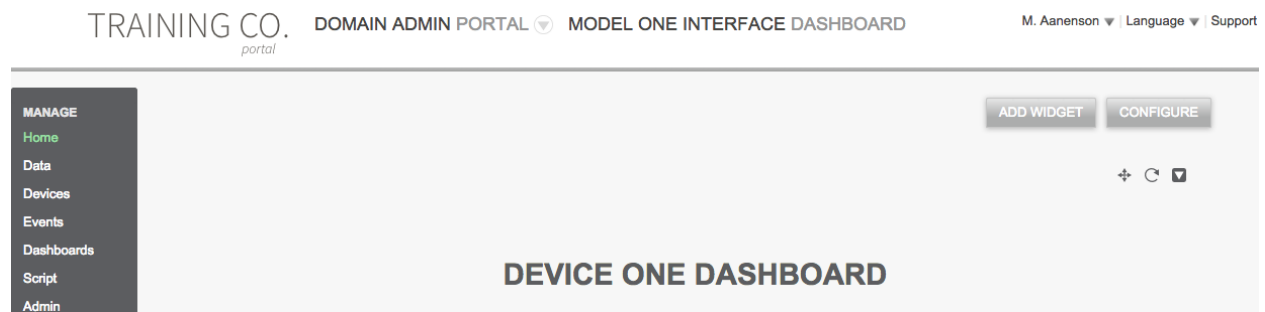
    Font size: 11 pt
    Font color:
        ●Black ○Blue ○Green ○Red
        ○Grey ○Medium Grey ○Light Grey
    CANCEL   SAVE

   c. Submit this, you should see this on your dashboard

TRAINING CO. portal   DOMAIN ADMIN PORTAL ▼ MODEL ONE INTERFACE DASHBOARD   M. Aanenson ▼ | Language ▼ | Support

MANAGE   ADD WIDGET   CONFIGURE
Home
Data   ✛ ⟳ ▼
Devices
Events
Dashboards
Script   DEVICE ONE DASHBOARD
Admin

7. Add a custom widget and call it 'DATA 1 GRAPH'.
8. Use the following widget settings:
      a. Insert the custom code from the Portals Lab, the code can be found
         in the 'portals_labs' folder, called
         'device_table_using_portal_api_2.js'.
      b. Keep refresh rate at 0 and leave all the other widget settings as
         is.
      c. Hit the Submit button.
9. You should now see this widget on your dashboard. You likely will not
   see anything listed since you probably do not have any devices in this
   portal yet.
10.We will add one more widget, a 'Custom Widget' widget and call it
   'CONFIGURATION'
      a. Width = 2, Height = 2

b. Select two data sources from the data source list, being 'Command' and 'Configuration'
c. Pick a script template, using the template called 'Form'.
d. Leave Refresh Rate to 0.
e. Hit Submit.

Add widget ⊠

STEP: TYPE   CONFIG

Block Title: CONFIGURATION

Widget Type: Custom Widget

Widget Size:

Width: 2

Height: 2

Data Source:

Select	Name
	DeviceOne CLONE
☐	Alive
☐	Cellular Status
☑	Command
☑	Configuration
☐	Data1

View Data By: ○ **Duration:** 1

Minute ⇕

● **Count:** 1

Script Template: Form ⇕

Script:

```
 1  /**
 2   * Form
 3   * @version 1.0.0
 4   */
 5  function(container, portal)
 6  {
 7    var dataports = getDataports("", portal),
 8        cx,
 9        buttons,
10        styles,
11        colors,
12        messages;
13
14    styles =
15    {
16      dl:
17      [
18        "margin-left: 1em;"
19      ],
20      div:
21      [
22        "position: absolute:",
```

Note: Press F11 to toggle full screen mode or press Ctrl+Enter to update your script while your cursor is focused on the editor.

Refresh Rate: 0   Seconds (0 seconds = no refresh)

QUIT   SUBMIT

f. Your dashboard should now look like this:

11. Go back to the admin area now and under the Domain Admin menu on the left, under Domain Setup, you'll find a page call 'Domain Dashboards.
12. In the box at the top called 'Add Domain Dashboard', select your 'MODEL ONE INTERFACE' dashboard you just created, which should show up under your VENDOR CLONES portal.
13. Leave the type as 'Client Model' and click the 'Add' button.

14. You should now see your dashboard listed under the Domain Dashboard Listing table.

Lab 6 – Create a Client Model
To create a client model, we first must have a 'Clone' device client to point it at. These steps will walk through that process and then creating the client model.

1. Go to your subdomain's 'admin' area and go to 'Client Models' menu item on the left and then 'Manage Models'.
2. At the top of the Manage Models page is a form to add a new client model. Fill in the following information, anything else just leave blank for now. You can edit client models after they are created.
    a. Model Name: Product One (you can pick whatever you want)
    b. Model ID: product1 *(this can not be changed, don't use spaces to make life easier)*
    c. Clone from Device: Select your device underneath your VENDOR CLONES portal that we copied earlier.
    d. Domain Dashboard: Select the Domain Dashboard we created in the previous step called 'MODEL ONE INTERFACE'
    e. Example SN: 000001
    f. Company Name: Your company name
    g. Company Contact Email: Use your Email for now
    h. Published: Check this box
    i. Click 'Add' to add the client model
    j. These images show these configuration options

k. You should then see your client model listed in the Model Listing
   at the bottom, like so. You can publish/unpublish by clicking the
   green (or red) icon in this table.

Lab 8 – Add serial numbers for your client model
Now that you have a client model, it can not be used until it has a 'whitelist' or range of available serial numbers. This lab will add some serial numbers and a range.

1. Go to the Admin / Client Models / Serial Numbers page using the admin menu on the left.
2. In the 'Add Serial Numbers' form on the top, select your new Client Model called 'Product One' (or whatever name you gave it)
3. Next select the option for 'Add One Serial Number' and put the following in:
   a. Use **000001** for your serial number
   b. For the (extra serial number info) field use: **{"info":"test unit"}**

   c. Click 'Add Serial Number(s)
4. You should now see that serial number 000001 in the serial number list for your client model.

5. Next we'll add a range of serial numbers, go bac to the top and use the Add Serial Numbers form again.
   a. Select your model
   b. Select the 'Auto Add SN' option and use **base10**.
   c. Specify your SN Range as **2 ~ 10**
   d. Specify your SN Length as **6**
   e. Hit Add Serial Numbers button.

6. You should now see this range listed at the top for your client model.

Note: Serial numbers here should match the exact serial number your device will activate with. So if your device will activate with a MAC address with all lower case but with colons, choose the proper base type of mac:48 which understand what a MAC address with colons is. If it doesn't use colons you could then choose base16 and provide a length of 12. Note that the 'Convert SN Casing' will automatically take what a user has entered in the 'Add Device' wizard and convert it to whatever you specify has a helper.

Examples:

Select Model: Product One

● Auto Add SN: ?   base16 �‿ (e.g. 00C3F1)

Auto Add SN Range: ?   0000000000 ~ FFFFFFFFFF

SN Length: ?   12

Convert SN Casing: ?   UPPERCASE ◌

Current Ranges:

Delete	Format	Case	Length	First value	Last value
🗑	base10		6	000002	000010
🗑	base16	upper	12	000000000000	FFFFFFFFFFFF
🗑	mac:48	lower		00:00:00:00:00:00	00:ff:00:ff:00:00

Lab 8 - Add some content for your Client Model
Vendors can post content for their client models that can be used for things such as firmware updates, media, or configuration files. We'll post a example file to mimic a firmware content post.
1. Go to the Admin / Client Models / Content page using the admin menu on the left.
2. In the 'Add Content' form on the top, select your Client Model called 'Product One' (or whatever name you gave it)
    a. Name: firmware_110
    b. Meta: firmware version 1.1.0
    c. MiME Type: application/binary
    d. Data File: find the 'firmware_110.py' file in your labs folder
    e. Click "Add Content'

3. You should now see this in the Content List for your model:

4. You've successfully posted some content for your cient model.

Lab 9 - Let's add a device using your client model
Now that your client model is created and published, users can add it in their portal using a drop down menu to select it.

First we'll create another portal to use for testing this instead of your 'VENDOR CLONES' portal we have been using. This is similar to Lab 3 to get started.

1. Click on the 'Portals' item in the Domain Admin Menu (left side) and then click 'Portal List'.
2. Add the top you should have a form called 'Add Portal'. We will use this to create this testing portal.
3. Fill in the following:
    a. Portal Name: 'New User Test'
    b. Portal Owner: <Pick yourself>
    c. Portal Plan: <You should have a plan call Community Plan with a balance of 20… these are included with a new subdomain>
    d. Portal Description: 'This portal is for domain admins to test user portal experience'
    e. Click 'Add and Charge Domain'. (If you have a balance, this will subtract from that)

4. In the Portal List below, you should now have a portal called 'New User Test'. Click this, which will take you to that Portal.
5. This portal should look something like this, since we have set the default home page up now for new users.

6. Click on the 'ADD DEVICE' button on this page in the welcome widget,
   which should bring up the add device wizard.

7. Select your client model from the supported devices below list and click
   'Continue'.
8. Enter the device's serial number (use 000001) in this case, give it a
   name like 'Test-000001' and hit 'Continue'

9. You can then hit the 'QUIT' button on the last page. This will bring you
   to the domain dashboard for this device, which should say it is not
   activated yet.

10. Click on the 'Home' menu item on the left, you should now see your device in the home page's device list widget. If you click on the device in that widget, it should bring you to the domain dashboard for it that we set up.

11. Let's examine the state of the device by clicking on the 'Devices' menu item on the left Manage menu. Then click on your device in the Device table.

12. Note that the 'Status' is listed as 'Not Activated'. It's waiting for your device to call in to activate at this point.
    a. Note there is a 24-hour window once a client has been claimed by an owner for the device to activate, otherwise the CIK will become expired and will need to be re-enabled.
13. On your computer, open the labs file called '**vendor_model_device_emulator.py**' with a code editor or with the Python 'IDLE' IDE (right – click and choose open with IDLE).
14. Edit the line that says vendor = '<YOUR_VENDOR_ID_HERE>' to be replaced by your vendor id (same as your subdomain prefix <vendorid>.exosite.com)
15. Save the file and run it using the syntax editor, command line (> python vendor_model_device_emulator.py) or with the IDLE IDE.
16. You should see that it attempts to activate, be successful, check for content, and start reading and writing data.

```
get stored CIK from non-volatile memory
problem getting stored CIK
try to activate
attempt to activate on Exosite OnePlatform
Activation Response: New CIK:48d636965b69dace1fb055e177e23a158c228464
storing new CIK to non-volatile memory
starting main looop
write data to Exosite OnePlatform
read data from Exosite OnePlatform
Command Value:command=1
read data from Exosite OnePlatform
Command Value:config=%7b
Checking for new firmware
EXO: attempt get content list on Exosite OnePlatform
--Content List:--
firmware_110

-----------
get stored firmware version from non-volatile memory
problem getting stored firmware version
storing firmware version to non-volatile memory
current firmware:  100
found new firmware to download: firmware_110
EXO: attempt to download content firmware from Exosite OnePlatform
Got New Download
UPDATING....
storing firmware version to non-volatile memory
updated firmware
get stored firmware version from non-volatile memory
current version: 110
stopping app loop in ~100 seconds
write data to Exosite OnePlatform
read data from Exosite OnePlatform
Command Value:command=1
read data from Exosite OnePlatform
Command Value:config=%7b
```

17. Also, if you look at the status of your device again, it should show up as 'Activated'.

18.You can go back to the home page now in your portal and click on the device. you should see active data in the widgets on the domain dashboard now for it.
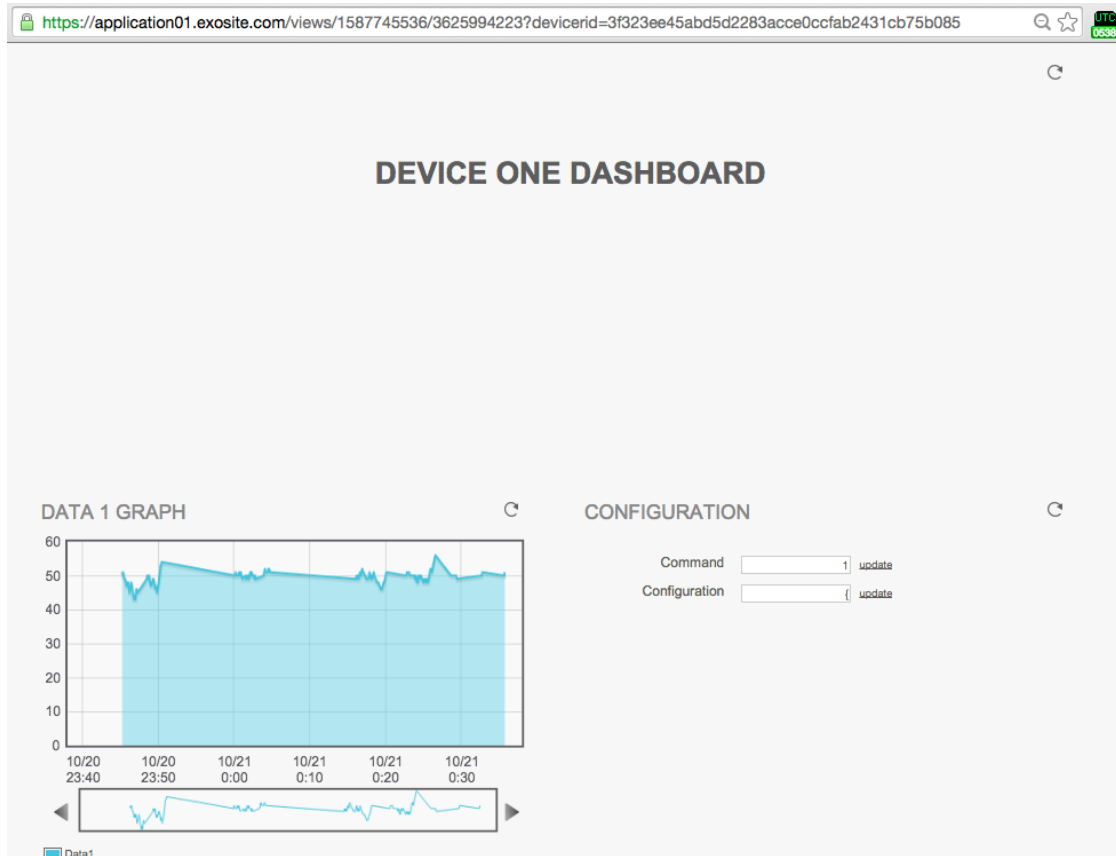
19.You've now tested out your client model and have the foundation to crate your own.

Lab 10 - Create another domain dashboard and add it to the menu
Admins can create their own menu on the left which can call make calls to any
of the /manage pages, external links, or domain dashboards.

Let's create a menu item called 'My Devices'. We'll use the device table
widget developed in the Portals Labs.

1. In your 'VENDOR CLONES' portal, go to the Dashboards page (Menu on the
   left) and click '+Add Dashboard'.
   a. It's name should be 'DEVICE TABLE'
   b. Fill in the description, keep the type custom.
2. Now go to that dashboard called 'DEVICE TABLE'. It should be blank.
3. Add a 'custom widget' widget and call it 'DEVICES'.
4. Use the following widget settings:
   a. Width 4, Height 2
   b. Insert the custom code from the Portals Lab, the code can be found
      in the 'portals_labs' folder, called
      'device_table_using_portal_api_2.js'.
   c. Keep refresh rate at 0 and leave all the other widget settings as
      is.
   d. Hit the SAVE button.
5. You should now see this widget on your dashboard. You likely will not
   see anything listed since you probably do not have any devices in this
   portal yet.
6. Go back to the admin area now and under the Domain Admin menu on the
   left, under Domain Setup, you'll find a page call 'Domain Dashboards.
7. In the box at the top called 'Add Domain Dashboard', select your 'DEVICE
   TABLE' dashboard you just created, which should show up under your VENDOR
   CLONES portal.
8. Leave the type as 'Client Model' and click the 'Add' button.
9. You should now see your dashboard listed under the Domain Dashboard
   Listing table.
10. To make this page available in the menu, go to the Domain
    Admin menu and select 'Domain Setup', then 'Configuration'.
11. Scroll down until you see the section 'Secondary Portal
    Menu'.
12. Click the 'Enable' button for the first item and enter a
    Display Name of 'My Devices'. In the next column, use the
    drop-down menu to select your 'DEVICE TABLE domain
    dashboard.
13. Scroll down a bit (not all the way to the bottom though)
    and click the 'Submit' button.
14. Go back to your Portal (you can click the top logo in the
    header) and you should see your new menu item on the left.