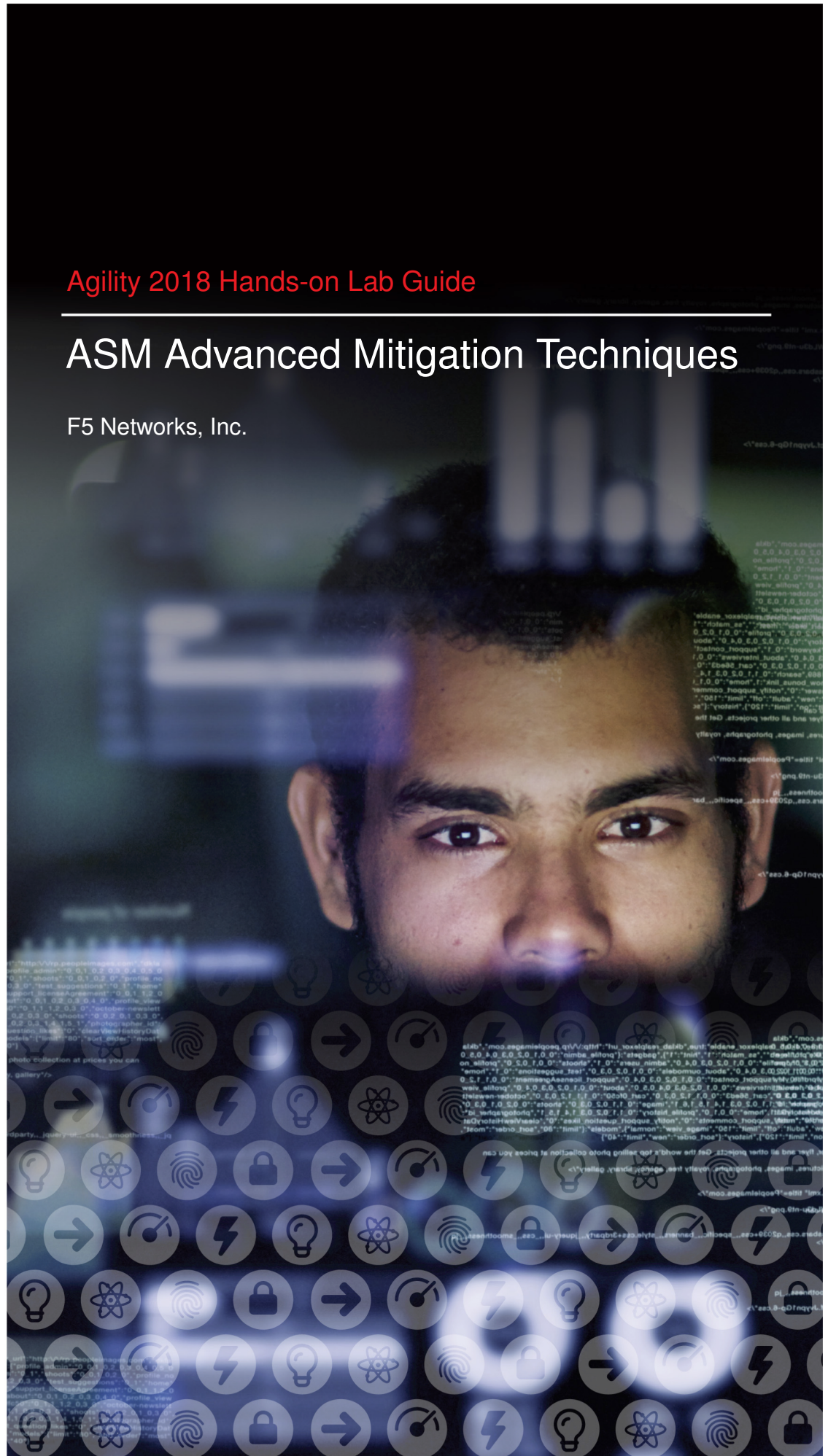




Agility 2018 Hands-on Lab Guide

ASM Advanced Mitigation Techniques

F5 Networks, Inc.



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Getting Started

Todo: Complete getting started instructions

Please follow the instructions provided by the instructor to start your lab and access your jump host.

Note: All work for this lab will be performed exclusively from the Windows jumphost. No installation or interaction with your local system is required.

1.1 Lab Topology

Todo: Complete lab topology

The following components have been included in your lab environment:

- 2 x F5 BIG-IP VE (v12.1)
- 1 x F5 iWorkflow VE (v2.1)
- 1 x Linux LAMP Webserver (xubuntu 14.04)
- 1 x Windows Jumphost

1.1.1 Lab Components

Todo: Complete lab components table

The following table lists VLANS, IP Addresses and Credentials for all components:

Component	VLAN/IP Address(es)	Credentials
Sample Host	<ul style="list-style-type: none"> • Management: 10.1.1.250 • Internal: 10.1.10.250 • External: 10.1.20.250 	admin/admin

Class - ASM Advanced Mitigation Techniques

Todo: Need class description

This class covers the following topics:

- Downloading a F5 Networks BIG-IP Virtual Edition
- Installing a BIG-IP Virtual Edition image on a hypervisor
- Installing a F5 Networks BIG-IP Appliance
- Powering on a BIG-IP Appliance

Expected time to complete: **3 hours**

2.1 Module – Installing a BIG-IP Virtual Edition

Todo: Needs module description

In this module you will learn how to install a F5 Networks BIG-IP Virtual Edition into your environment.

2.1.1 Lab – Download the BIG-IP Virtual Edition Image

Todo: Needs lab description

This lab will teach you how to download the BIG-IP Virtual Edition image to your system.

Task – Open a Web Browser

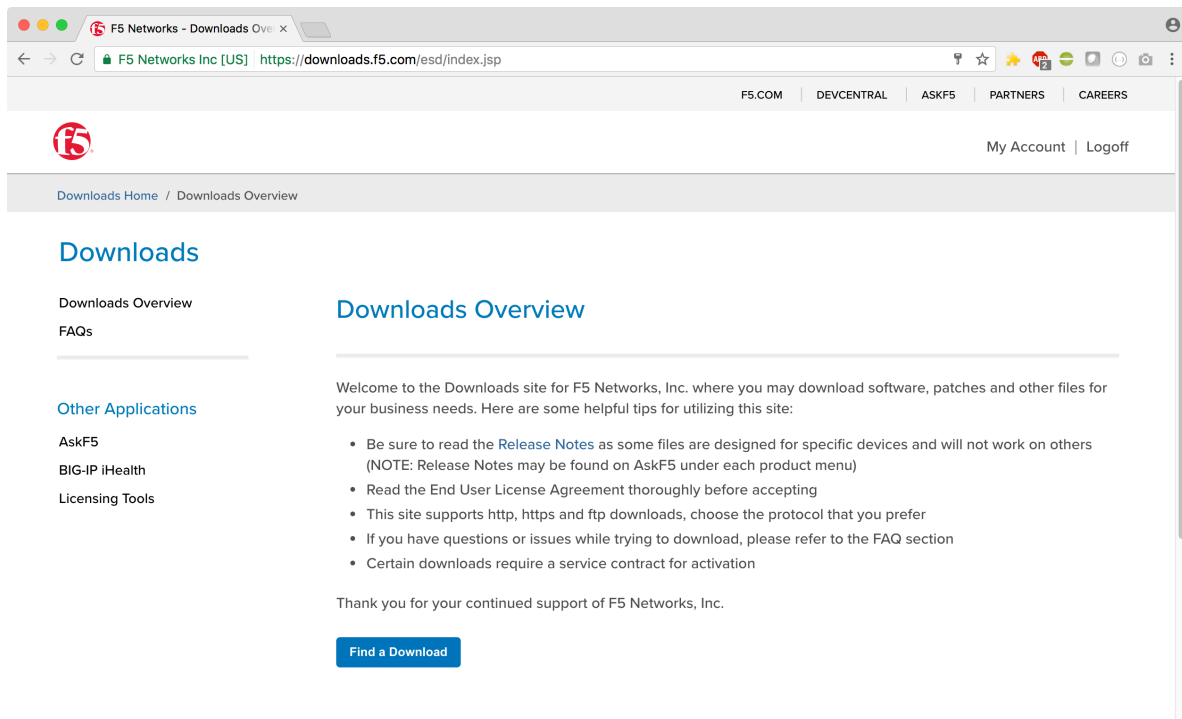
Todo: Needs task description

In this task you will open a web browser and navigate to the F5 Networks Downloads site.

Note: An account is required to download software. You can create one at <https://login.f5.com/resource/registerEmail.jsp>

Follow these steps to complete this task:

1. Open your web browser
2. Navigate to <https://downloads.f5.com>
3. Login with your username and password.
4. After logging in you should see the following window:



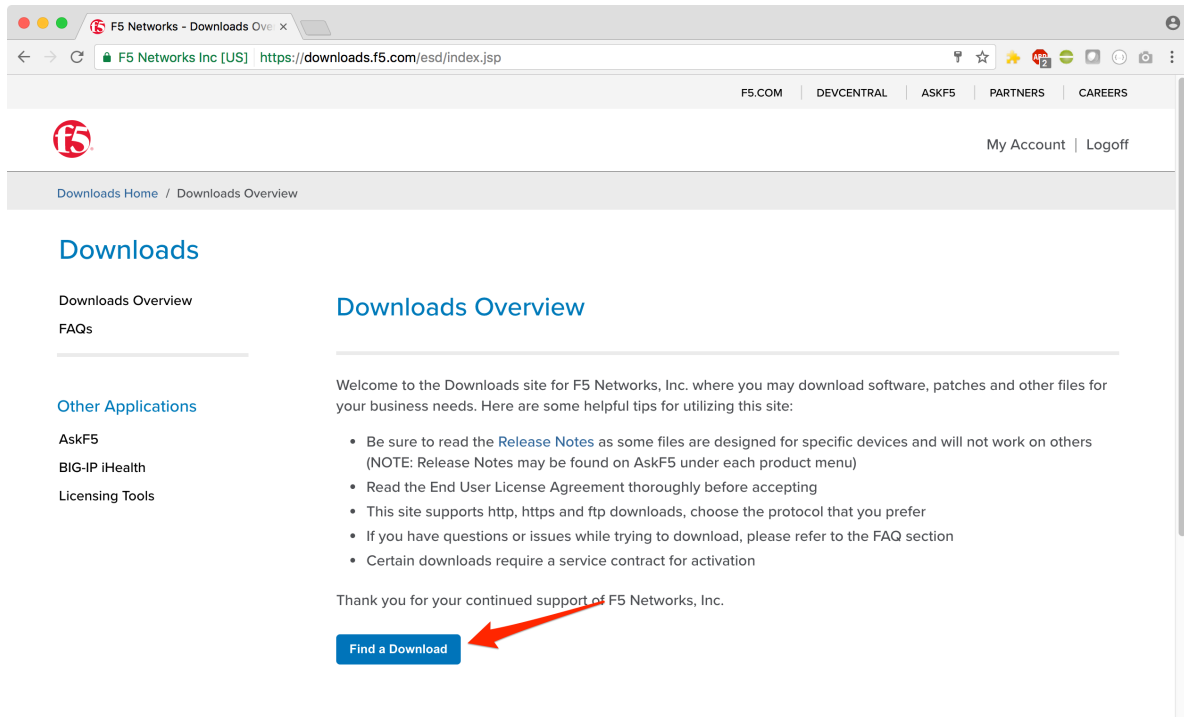
Task – Download the Image

Todo: Needs task description

In this task we will download the F5 Networks BIG-IP Virtual Edition image to your system

Follow these steps to complete this task:

1. Click the 'Find a Download' button.



2. Click the link that contains the BIG-IP TMOS software version you would like to download.

Important: Be sure to click a link that has “Virtual Edition” in the name

3. Find the image appropriate for your hypervisor
4. Download the image and save it to your local system

2.1.2 Lab – Install a BIG-IP Virtual Edition image on a Hypervisor

Todo: Needs lab description

In the previous lab we learned how to download the BIG-IP Virtual Edition image. Now, we can install the image onto a hypervisor.

Task – Upload the image to your Hypervisor

Todo: Needs task description

In this task you will upload the image to your hypervisor.

Follow these steps to complete this task:

1. Open your hypervisor management console
2. Figure out how to upload the image

Error: These are bad instructions. . .

3. Great! You're done

Task – Start a BIG-IP Virtual Edition Instance

Todo: Needs task description

In this task we will start an instance of BIG-IP using the image uploaded in the previous task.

Follow these steps to complete this task:

1. Open your hypervisor management console
2. Click the BIG-IP image
3. Click the 'Start' button (or it's equivalent)

2.2 Module – Installing a BIG-IP Appliance

Todo: Needs module description

In this module you will learn how to install a F5 Networks BIG-IP Appliance into your datacenter.

2.2.1 Lab – Install a F5 Networks BIG-IP Appliance

Todo: Needs lab description

In this lab we will unpack and install the BIG-IP Appliance into a rack in your datacenter.

Task – Unpack the BIG-IP Appliance

Todo: Needs task description

In this task you will remove the BIG-IP Appliance from its packaging.

Follow these steps to complete this task:

1. Open the box with an extremely sharp knife or cutter

Danger: Knives are sharp and can cut you. Please be careful.



2. Carefully remove the BIG-IP from its packaging
3. Set it down on a stable surface

Task – Install the BIG-IP Appliance in a Datacenter Rack

Todo: Needs task description

In this task you will install the BIG-IP Appliance into a Rack. You will need the following tools:

- Phillips Screwdriver
- Hammer
- Crowbar

Caution: Appliances can be heavy. Please follow all applicable safety guidelines.

Follow these steps to complete this task:

1. Install the rackmount rails onto the appliance using the included hardware
2. Lift the appliance into place
3. Complete installation by using your tools to secure the appliance.

2.2.2 Lab – Power-on the BIG-IP Appliance

Todo: Needs lab description

In this lab we will connect the power cord and turn on the BIG-IP Appliance.

Task – Connect the Power Cord

Todo: Needs task description

In this task you will connect the appropriate power cord.

Important: Be sure to use the appropriate power cord for your region. Follow all applicable electrical guidelines and codes.

Follow these steps to complete this task:

1. Connect one end to the BIG-IP
2. Connect the other end to the power source

Task – Turn on the BIG-IP Appliance

Todo: Needs task description

In this task you turn on the BIG-IP Appliance.

Follow these steps to complete this task:

1. Push the 'On' button
2. Verify the red F5 ball lights up

Examples of Common Formatting

Todo: Examples need to be removed from your class

Hint: To remove this page:

1. Edit the `index.rst` file and remove the `examples` line
 2. Delete the `examples.rst` file
-

This page has examples of many different types of formatting that can be achieved using reStructuredText. Complete documentation is available at:

<http://www.sphinx-doc.org/en/stable/rest.html>

Hint: [Click here to view the source of this page](#)

3.1 Text Markup

3.1.1 Emphasis

italic text

bold text

3.1.2 Code Samples

code sample

This is one example of a code block:

```
import math
print 'import done'
```


Code block without syntax highlighting:

```
$ ls -l
total 96
-rw-r--r-- 1 user  staff   610 Jun 22 17:51 Makefile
drwxr-xr-x 4 user  staff   136 Jun 22 21:14 _build
drwxr-xr-x 3 user  staff   102 Jun 22 21:16 _static
drwxr-xr-x 3 user  staff   102 Jun 22 17:55 _templates
drwxr-xr-x 5 user  staff   170 Jun 22 21:00 classl
-rw-r--r-- 1 user  staff  6764 Jun 22 21:26 conf.py
-rw-r--r--@ 1 user  staff   733 Jun 22 21:41 examples.rst
-rw-r--r-- 1 user  staff   152 Jun 22 21:32 index.rst
-rw-r--r-- 1 user  staff   995 Jun 22 20:55 intro.rst
-rw-r--r-- 1 user  staff   817 Jun 22 17:51 make.bat
$
```

Code block with syntax highlighting:

Note: A list of supported languages can be found at [here](#)

```
import math
a = 1
b = 2
sum = a + b
print 'Sum: %s' % sum
```

Code block with highlighting and line numbers:

```
1 import math
2 a = 1
3 b = 2
4 sum = a + b
5 print 'Sum: %s' % sum
```

Code block with highlighting, line numbers, and line highlighting:

```
1 import math
2 a = 1
3 b = 2
4 sum = a + b
5 print 'Sum: %s' % sum
```

3.2 Substitutions

rST:

```
.. |name| replace:: replacement *text*

|name|
```

Result:

replacement *text*

3.2.1 Pre-configured Substitutions

A number of common substitutions are pre-configured for convenience:

Name	Value
classname	ASM Advanced Mitigation Techniques
classbold	ASM Advanced Mitigation Techniques
classitalic	<i>ASM Advanced Mitigation Techniques</i>
ltm	Local Traffic Manager
adc	Application Delivery Controller
gtm	Global Traffic Manager
dns	DNS
asm	Application Security Manager
afm	Advanced Firewall Manager
apm	Access Policy Manager
ipi	IP Intelligence
iwf	iWorkflow
biq	BIG-IQ
bip	BIG-IP
f5	F5 Networks
f5i	F5 Networks, Inc.
year	2018

3.3 Hyperlinks

3.3.1 External

- Bare URL: <https://www.f5.com>
- Named Link: Click [here](#) to goto F5's website

3.3.2 Internal

- Reference section headers in this document: [Hyperlinks](#)
- Reference other pages: [Welcome](#)

3.4 Lists

3.4.1 Unordered Lists

- This
- Is
- A
- List

3.4.2 Ordered Lists

1. One
2. Two
3. Three
4. Four

3.4.3 Nested Lists

- This
 1. One
 2. Two
 - Alpha
 - Bravo
 - Charlie
- Is
 - 1
 - 2
- A
- Nested
- List

3.5 Tables

3.5.1 List Tables

With Stub Column

Column 1 (Stub)	Column 2	Column 3
Row 1	Value 1	Value 2
Row 2	Value 1	Value 2

Without Stub Column

Column 1	Column 2	Column 3
Row 1	Value 1	Value 2
Row 2	Value 1	Value 2

3.5.2 Grid Tables

Header row, column 1 (header rows optional)	Header 2	Header 3	Header 4
body row 1, column 1	column 2	column 3	column 4
body row 2	Cells may span columns.		
body row 3	Cells may span rows.	<ul style="list-style-type: none">• Table cells• contain• body elements.	
body row 4			
body row 5	Cells may also be empty: -->		

Giant Tables

Header 1	Header 2	Header 3	Header 1	Header 2	Header 3	Header 1	Header 2	Header 3	Header 1	Header 2	Header 3
body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3
body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3
body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3
body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3	body row 1	column 2	column 3

3.5.3 Simple Tables

A	B	A and B
False	False	False
True	False	False
False	True	False
True	True	True

3.6 Admonitions

Admonitions (a.k.a Callouts) can be used to make important information stand out. Examples of different admonitions are shown below.

When including TMSH commands please use the TMSH admonition

3.6.1 TMSH

TMSH

tmsh show sys hardware

3.6.2 Hint

Hint: This is a HINT admonition

3.6.3 Important

Important: This is a IMPORTANT admonition

3.6.4 Tip

Tip: This is a TIP admonition

3.6.5 Note

Note: This is a NOTE admonition

3.6.6 Attention

Attention: This is a ATTENTION admonition

3.6.7 Caution

Caution: This is a CAUTION admonition

3.6.8 Warning

Warning: This is a WARNING admonition

3.6.9 Error

Error: This is a ERROR admonition

3.6.10 Danger

Danger: This is a DANGER admonition

3.7 TODO's

TODO items can be marked in your docs. By default the item will be included in the generated docs and a build warning will be printed.

To change the defaults edit `conf.py` and look modify

```
todo_emit_warnings = True
todo_include_todos = True
```

Here is the rST code for a TODO:

```
.. TODO:: This is my example todo. Please ignore me.

.. TODO:: This is my second example todo. Please ignore me.
```

And the TODO themselves:

Todo: This is my first example todo. Please ignore me.

Todo: This is my second example todo. Please ignore me.

You can also get a list of TODO's:

rST:

```
.. TODOLIST::
```

Todo: Need class description

(The original entry is located in `/home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/class1.rst`, line 33.)

Todo: Needs lab description

(The original entry is located in `/home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/lab1.rst`, line 33.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/lab1.rst, line 40.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/lab1.rst, line 60.)

Todo: Needs lab description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/lab2.rst, line 33.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/lab2.rst, line 41.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/lab2.rst, line 59.)

Todo: Needs module description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module1/module1.rst, line 33.)

Todo: Needs lab description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/lab1.rst, line 33.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/lab1.rst, line 41.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/lab1.rst, line 59.)

Todo: Needs lab description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/lab2.rst, line 33.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/lab2.rst, line 40.)

Todo: Needs task description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/lab2.rst, line 55.)

Todo: Needs module description

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/class1/module2/module2.rst, line 33.)

Todo: Examples need to be removed from your class

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/examples.rst, line 33.)

Todo: This is my first example todo. Please ignore me.

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/examples.rst, line 425.)

Todo: This is my second example todo. Please ignore me.

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/examples.rst, line 427.)

Todo: Complete getting started instructions

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/intro.rst, line 33.)

Todo: Complete lab topology

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/intro.rst, line 46.)

Todo: Complete lab components table

(The original entry is located in /home/docs/checkouts/readthedocs.org/user_builds/f5-asm-advanced-protection/checkouts/latest/docs/intro.rst, line 58.)

3.8 Font-Awesome Icons

The `f5-sphinx-theme` can use icons from the Font Awesome:

<http://fontawesome.io/icons/>

For example:

```
* :fonticon:`fa fa-home`  
* :fonticon:`fa fa-home fa-lg`  
* :fonticon:`fa fa-home fa-border`  
* :fonticon:`fa fa-home fa-2x`  
* :fonticon:`fa fa-home fa-3x`  
* :fonticon:`fa fa-home fa-4x`  
* :fonticon:`fa fa-gear fa-spin fa-4x`  
* :fonticon:`fa fa-gear fa-spin fa-4x text-success`
```

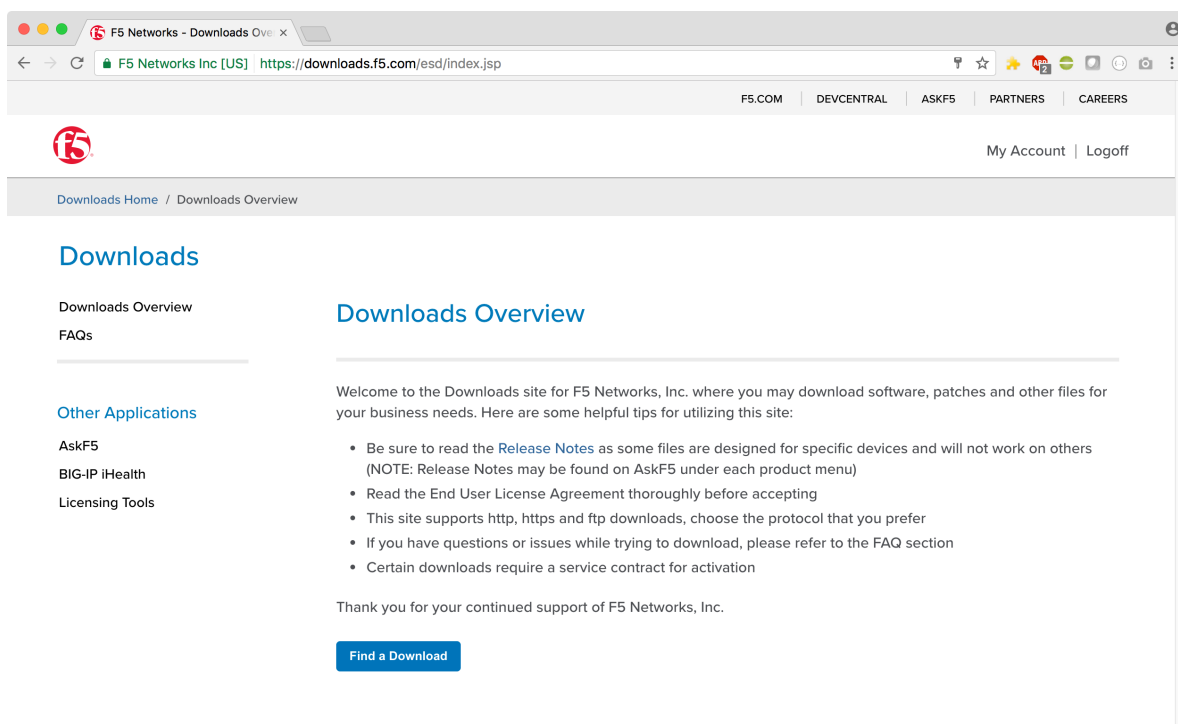
-
-
-
-
-
-
-
-

Markdown files are also supported

We also support **Markdown!**

Follow these steps to complete this task:

1. Step 1



2. Step 2

3. Step ...

4. Step n

WE MAKE APPS  FASTER.
SMARTER.
SAFER.

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US Headquarters: 401 Elliott Ave W, Seattle, WA 98119 | 888-882-4447 // Americas: info@f5.com // Asia-Pacific: apacinfo@f5.com // Europe/Middle East/Africa: emeainfo@f5.com // Japan: f5j-info@f5.com
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