



Navy Digital Experience

HACKtheMACHINE SEATTLE

Track 1-Advanced Challenge

September 21 – 23, 2018



Booz | Allen | Hamilton

PART I – IN PORT

TIME LIMIT: 15 MINUTES



IDENTIFY THE TARGET

Challenge

The objective ship is docked in the Port of Boston. Before it gets underway, gain access to the email server and procure the ship's manifest.

Points

Base Score: 100 points

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points



ACCESS THE FIRE SUPPRESSION WEBSITES

Challenge

Remotely access the websites for the Human Machine Interface (HMI) and the Programmable Logic Controller (PLC) by utilizing reconnaissance techniques.

Points

Base Score: 100 points total
50 points for each website
Partial Credit Accepted



MAP THE NETWORK

Challenge

Take advantage of the ship's position in port to chart the terrain.
Fill in the Network Map Worksheet.

Points

Base Score: 200 points total
Bonus Points Available
Partial Credit Accepted

See Worksheet for more details.

PLANT A REMOTE ACCESS TOOL

Challenge

You may need tools on the system before it gets underway to help you later on in your mission.

Leave a remote access tool somewhere on the system to facilitate future access.

Points

Base Score:

CAN Bus Access: 300 points

Ethernet Access: 200 points

Underway Accessibility Multiplier:

Adjacent: 1x

Remote: 2x

Hint Penalty: 50 points

PART II – HIGH SEAS

TIME LIMIT: 15 MINUTES



SPOOF FIRE SUPPRESSION EVENTS

Challenge

SpooF a fire event that trips/activates the fire system alarms and/or fire pumps.

Points

Base Score: 300 points (100 for the alarm; 200 for the fire pumps)

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points

CREATE A WEATHER EVENT

Challenge

The ship's destination is set to the Port of Waterford (52.15°N, 6.95°W). Can you divert it to another port?

Create a fake catastrophic weather event at (52.12°N, 10.69°W) to cause the ship to change course.

Points

Base Score: 400 points

Method Multiplier

Over the Wire: 1x

Through Sirius XM Satellite: 10x

Hint Penalty: 50 points

BONUS POINTS: Displays on RADAR: 100 points

CHANGE COURSE - PHYSICAL

Challenge

The ship is headed toward the Southern-most canal of the Port of Galway (53.26892°N, 9.0405°W); you want to direct it to the Northern canal.

Move the rudder to alter the ship's course towards the Northern Port (53.270141°N, 9.050613°W).

Points

Base Score: 300 points

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points

CHANGE COURSE - IMPACT NAVIGATION

Challenge

After changing the ship's course towards the Northern Port (53.270141°N, 9.050613°W), alter the components (ex. Chart Plotter, Autopilot, RADAR, etc...) to mask the change in navigation.

Points

Base Score: 300 points

Access Multiplier:

One Sensor: 1x

Two Sensors: 2x

Three Sensors: 4x

Hint Penalty: 50 points

CHANGE THE SPEED

Challenge

The objective ship will arrive at its destination port too early.

Slow down the ship.

Points

Base Score: 100 points

Sensor Multiplier:

One Sensor: 1x

Two Sensors: 2x

Three Sensors: 4x

Hint Penalty: 50 points

PART III – RESTRICTED WATERS

TIME LIMIT: 15 MINUTES



DISABLE THE FIRE SUPPRESSION SYSTEM

Challenge

Disable the fire suppression system without alerting an operator.

The HMI for the Fire Suppression System should look operational, however the system should not react to fire or smoke.

Points

Base Score: 300 points

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points

CREATE A FAKE NAVAID

Challenge

Create an AIS Navaid at (53.269667°N, 9.048617°W).

Points

Base Score: 150 points

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points

BONUS POINTS: Displays on RADAR: 100 points

FAKE A DISTRESS SIGNAL

Challenge

Generate a false distress signal from your boat to lure the ship to your location.

Points

Base Score: 150 points

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points

ALTER THE DEPTH SENSOR

Challenge

You want the ship to run aground on a sandbar located in vicinity of (53.269551°N, 9.048574°W), but if the bridge crew notices the water is getting shallow they will change course.

Change the depth sensor so the displayed water depth is always greater than 100 feet.

Points

Base Score: 200 points

Access Multiplier:

Physical Access: 1x

Adjacent: 2x

Remote: 4x

Hint Penalty: 50 points