



Title:	Connecting And Navigating The Jace2 Controller
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## OVERVIEW

This document will advise how to set up a laptop, connect to the Jace2 controller, and use the graphical interface.

## BEFORE GOING TO SITE, THE USER MUST HAVE THE FOLLOWING:

- Cell phone
- Cell phone charger
- Cross over cable – See this link for more information: [https://en.wikipedia.org/wiki/Ethernet\\_crossover\\_cable](https://en.wikipedia.org/wiki/Ethernet_crossover_cable)
- Updated laptop with an active Ethernet Port and a proper driver, the current version of Java installed, and Firefox ESR version 52.1.2 (32-bit). See the Web Browser section on Page 5 for further details.
- Laptop charger

**NOTE:** If you are not experienced with connecting to the Jace2 Controller and your location is far away, then it is a good idea to stop by a local store and attempt to get connected to the controller before heading to site.

## INITIAL LAPTOP SETUP

The following items will need to be completed **BEFORE** going to the site (unless you have an on-site internet connection and extra time)

### ETHERNET PORT VERIFICATION

Make sure the laptop has a full-size Ethernet port. This port allows the user to connect a CAT5 Ethernet Crossover cable into it (imagine an oversized telephone jack).

To ensure this port is active, go into **Settings > Network and Sharing Center > Change Adapter Settings** or **Manage Network Connections** depending on what version of Windows is loaded. If you see an icon that says **Ethernet** or **Local Area Connection**, right-click and enable. If you do not see this icon, then you are likely missing the driver for the Ethernet port.

To double-check, go into **Device manager > Network Adapters** and check to see if you have a network adapter that is **NOT** for WLAN/Wireless/WIFI. If all are for wireless connections, then the proper driver is not installed to be able to use this port. Search the internet with your laptop model and download the appropriate driver or contact your IT Department for assistance.

### CONFIGURING JAVA

The JACE2 Controller user interface requires that JAVA be installed on the user's laptop. It is recommended that the Java runtime environment be updated to the latest version (currently Version 8 Update261). To update the version of Java, follow the steps shown below.

1. Open the **Control Panel** and select **Programs**
2. Select **Java** and the Java Control Panel window will open
3. Select the **Update Tab**, then select **Update Now**. A popup screen will appear and will either state you already have the latest version or will give the next steps to update.

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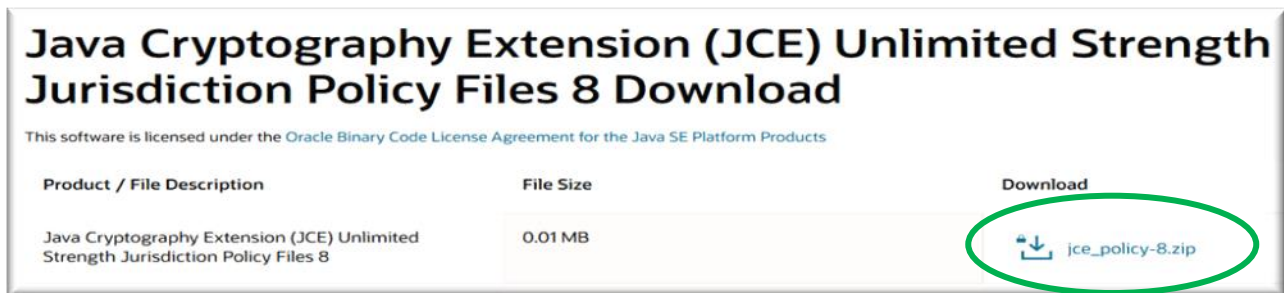
## CONFIGURING JAVA (CONT'D)

The laptop will also need to be updated with two additional JRE Java files by pasting them into the Java Security folder within the Java folder. To add the Java Security files, follow the below steps.

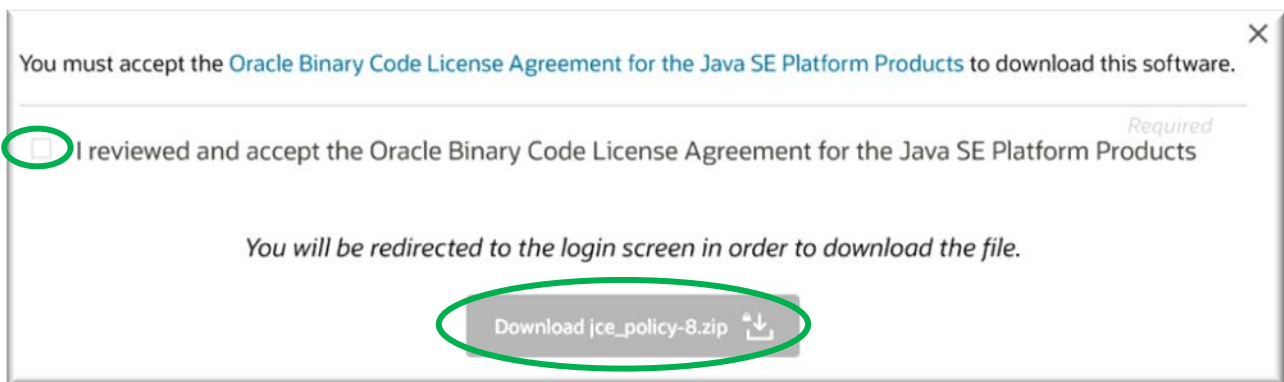
1. Select the following link to get the JAVA Security files.

<https://www.oracle.com/java/technologies/javase-jce8-downloads.html>

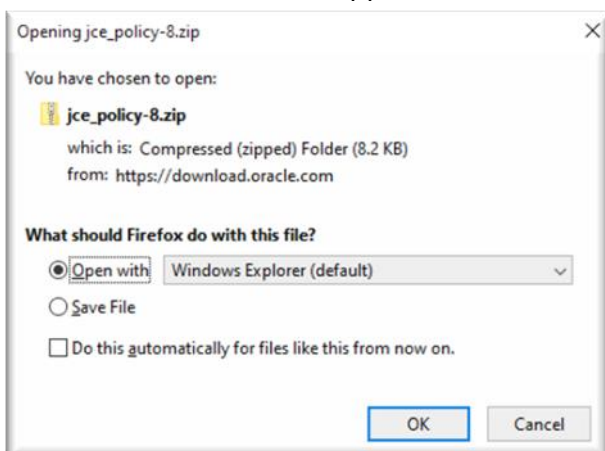
2. A screen like below will appear after clicking the above link.
3. Select the **jce\_policy-8.zip** as highlighted below.



4. Select the Accept Oracle Binary Code License Agreement box as highlighted below.
5. Select the **Download jce\_policy-8.zip** link highlighted below to download the file.

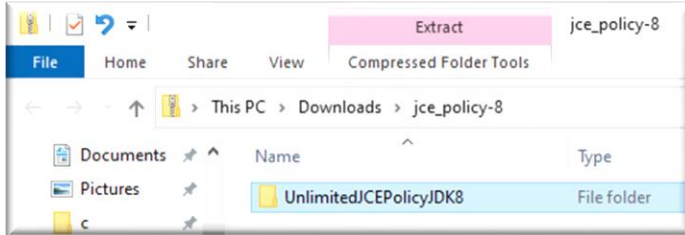


6. Login using the Oracle Account Sign in window or create an account to continue.
7. The below screen should appear. Select the OK button.



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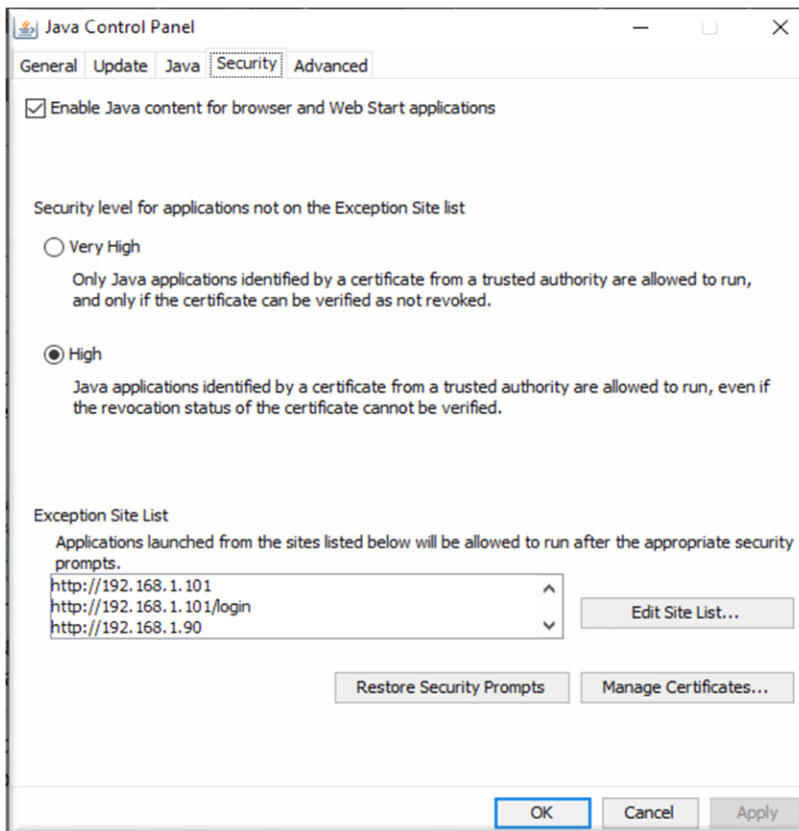
8. The screen that appears should look something like what is shown below.



9. Select the **UnlimitedJCEPolicyJDK8** and the information that is shown below will appear.

Name	Type	Compressed size	Password ...	Size	Ratio
local_policy	Executable Jar File	3 KB	No	3 KB	14%
README	Text Document	3 KB	No	8 KB	67%
US_export_policy	Executable Jar File	3 KB	No	3 KB	14%

- Use the Control key to highlight the files in blue as shown above, then right-click on the highlighted area and select Copy.
- Navigate to your Java folder through **C: > Program Files or Program Files (x86) > Java > jre > lib > security**, then right-click in an empty area and select paste to input the copied files, replacing any older ones that might be there. Once complete close out all of the open windows.
- Open the Java Control Panel, go to the **Security** tab, select the **Edit Site List** button, and add the exceptions as shown below.



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## ADDITIONAL LAPTOP SETUP

### INSTALLING MOZILLA FIREFOX ESR WEB BROWSER

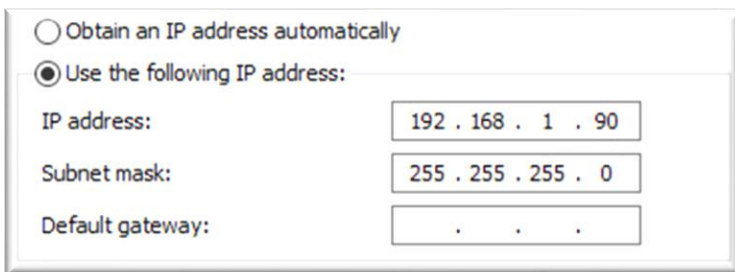
To use Java with the Mozilla Firefox browser you must have the Extended Support Release version of Mozilla Firefox (v52.1.2esr) installed on your laptop. To do so:

1. Uninstall all other versions of Mozilla Firefox from your machine.
2. Use the download link shown below to download the 32-bit version of the browser version known to work. <https://ftp.mozilla.org/pub/firefox/releases/52.1.2esr/win32/en-US/>
3. After downloading the file, disconnect the laptop from the internet connection.
4. Open the file and run the installation. Follow the Install Wizards instructions for a standard installation.
5. After installation is complete, open the Mozilla Firefox v52 ESR browser.
6. Select the **Menu** button (three lines) in the top right corner of the browser and select **Addons**.
7. Find the **Java™ Platform SE...** addon and select the dropdown box to the right of it. Select **Always Activate**.
8. Select the **Menu** button again and select **Options**, then select the **Advanced** tab and choose **Never Check for Updates**.
9. While in the **Advanced** tab also make sure that the **Use a background service to install updates** box is unchecked.

### ETHERNET PORT CONFIGURATION AND SETUP

The following instructions will show how to configure the Ethernet or Local Area Network. Based upon the Windows platform you are using, your configuration may be slightly different. Go into the **Control Panel** so you can access the *Ethernet* or *Local Area Network* settings. This can be done by going to the **Start Menu > Settings > Network & Internet > Ethernet or Local Area Network > Change Adapter Options**. Right-click on *Ethernet* or *Local Area Connection* and choose **Properties**, then select **Internet Protocol Version 4**, once it is highlighted click on the **Properties** button.

Enter the IP address and Subnet mask as shown below:



Select OK, and now the laptop is configured to plug into the CES Unit Controller.

### CLEARING THE CACHE

It is important to clear the *Ethernet* or *LAN* Cache before attempting to connect to a new controller. This should even be done before attempting to connect to other controllers on the same job site. This can be completed by Right-clicking on **Ethernet** or **Local Area Connection** and selecting **Disable**. Once disabled, right-click again and select **Enable**. This will clear the cache and bring you one step closer to connecting successfully.

Title: Connecting to & Navigating the CES JACE2 Controller Procedure

## JACE2 ETHERNET CONNECTION POINT

The Jace2 controller is installed on the left-hand side of the control panel. To find the Jace2 Controller's LAN1 port, remove the cover by pressing inward on the two push-in clips at the top allowing the cover to slide off. Do not forcefully remove the cover. Once the cover is removed, see the picture below to attach your laptop to the Jace2 Controller's LAN1 port by use of an Ethernet Crossover cable as shown below. Replace the Jace2 Controller module cover once connected to the LAN1 port. Only an Ethernet Crossover cable will work for this type of application. Information on crossover cables can be found in the Before Going to Site section on page 2.



Ethernet Crossover cable plugged into **LAN1** port on the Controller Module

Jace2 Controller Module: This is where the crossover cable will be connected to gain access to the I/O Control Modules

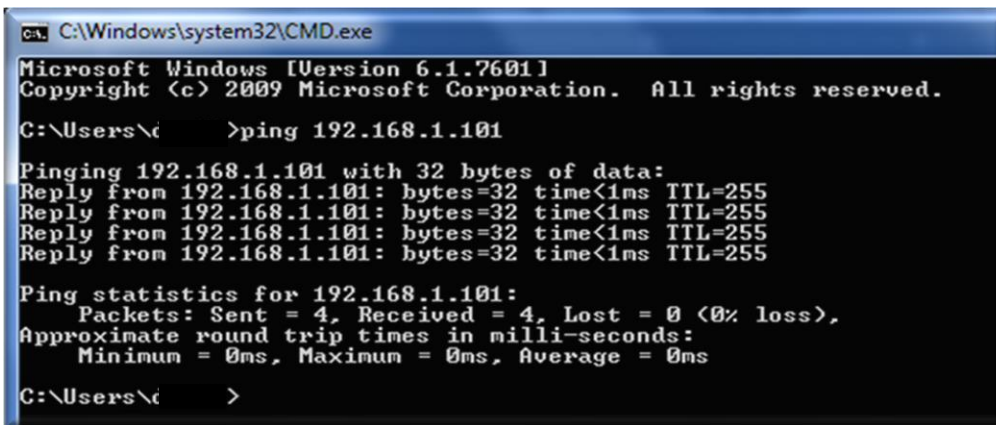
Title: Connecting And Navigating The Jace2 Controller

## PINGING THE CONTROLLER

To verify that the correct cable is being used and to determine if there is a connection at the controller, we will ping the controller before we try to connect. This will give us confirmation that we are indeed set up correctly and are ready to connect.

- Select the **Start** button
- Type **Run** and select the **Enter** button
- Type **CMD** into the Open prompt and select “OK”
- If the cable is plugged into LAN1, then type in the following data after the **>**:  
C:\Users\computer name>**ping 192.168.1.101** and select the **Enter** button

If the ping is successful, it will look similar the screen below.



```

C:\Windows\system32\CMD.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

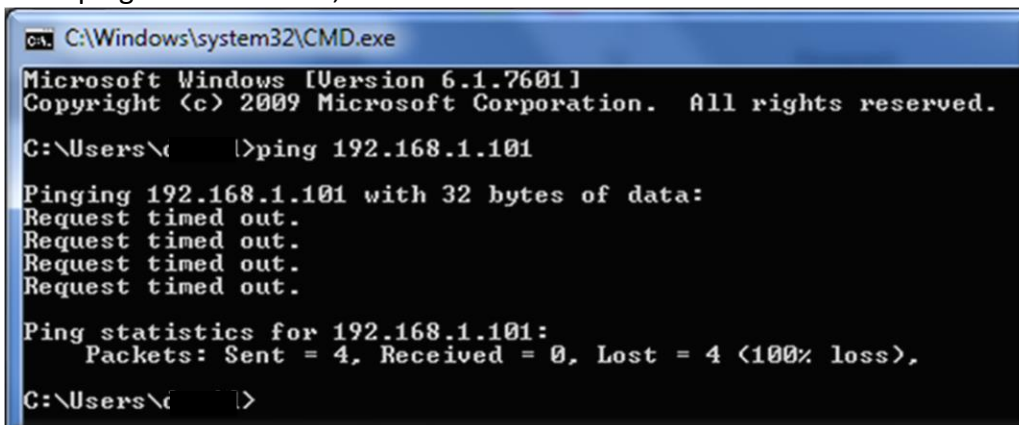
C:\Users\c      >ping 192.168.1.101

Pinging 192.168.1.101 with 32 bytes of data:
Reply from 192.168.1.101: bytes=32 time<1ms TTL=255
Reply from 192.168.1.101: bytes=32 time<1ms TTL=255
Reply from 192.168.1.101: bytes=32 time<1ms TTL=255
Reply from 192.168.1.101: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\c      >
  
```

If the ping is unsuccessful, it will look similar the screen below.



```

C:\Windows\system32\CMD.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\c      |>ping 192.168.1.101

Pinging 192.168.1.101 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.101:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\c      |>
  
```

If the above screen appears, there could be possible errors:

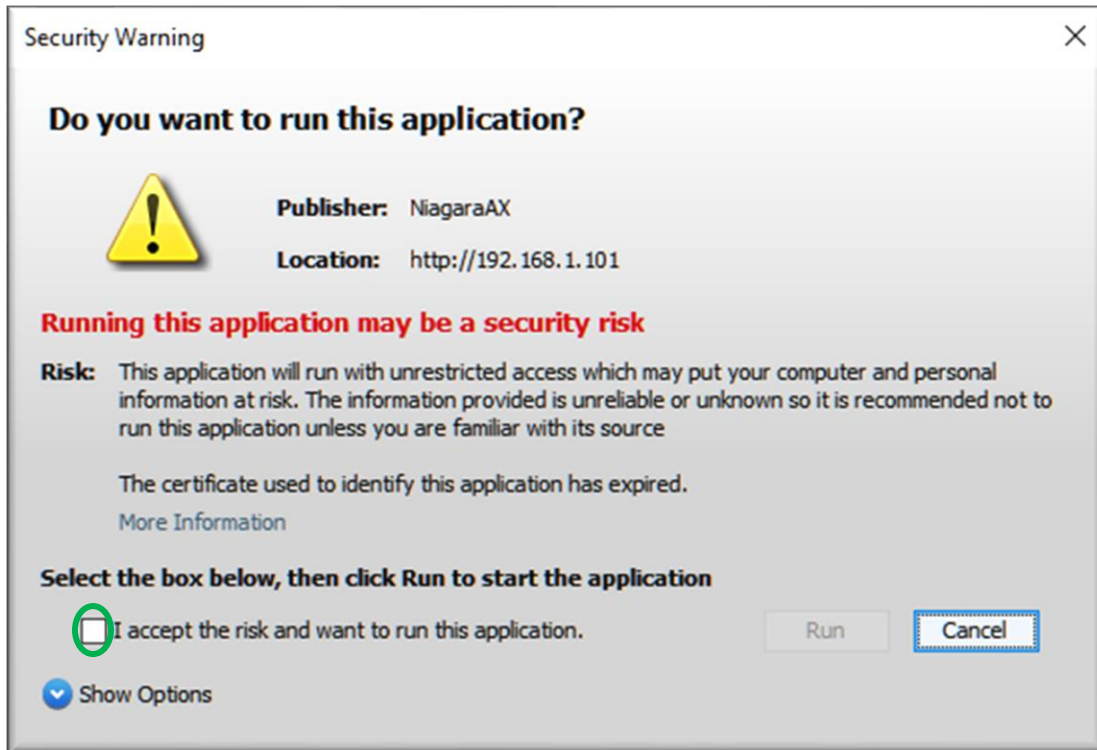
1. The cable that is being used is a standard CAT5 internet cable that is used between a modem and a computer. A **Crossover** cable is required for networking between computers.
2. The controller may need up to 5 min to recognize the connection.
3. The settings were improperly set up in the ETHERNET PORT CONFIGURATION AND SETUP steps on page 5.
4. The cable is plugged into LAN2 and this unit was built before April 1, 2013.
5. The controller needs to be reset. This can be done by unplugging the battery backup located behind the controller cover and then removing the power to the controller by either disconnecting the 24VAC power connector or by cycling the unit power.

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## LOGGING INTO THE JACE2 CONTROLLER - IMPORTANT! PLEASE READ

Now that the laptop is properly configured and connected to the Jace2 Unit controller, the user can access the controller by using the previously installed web browser. **Note:** Access has been tested using only the Mozilla Firefox ESR version listed on page 5. The use of any other web browsers for connectivity purposes will not work. Open the web browser and type in the following IP address: **192.168.1.101**, select the **Enter** button, and the login screen should appear.

If the below warning message pops up, select the box as highlighted below, and then select the **Run** button. If any additional security messages appear at the top of the browser select **Allow & Remember** and then continue.



## LOGIN SCREEN DETAILS

You will be asked for a Username and Password to gain access to the controller. Enter the following:

**Username:** administrator

**Password:** aaon



Select the **Login** button.

If this is the first time logging into the Jace2 controller, the application may take several minutes to download. If you only see a little box with a red x in the upper left-hand corner, there is not a working version of Java. Java must be downloaded and installed as described in the CONFIGURING JAVA section starting on page 2. Once the application has fully downloaded, the Graphical User Interface should appear as shown on the next page.

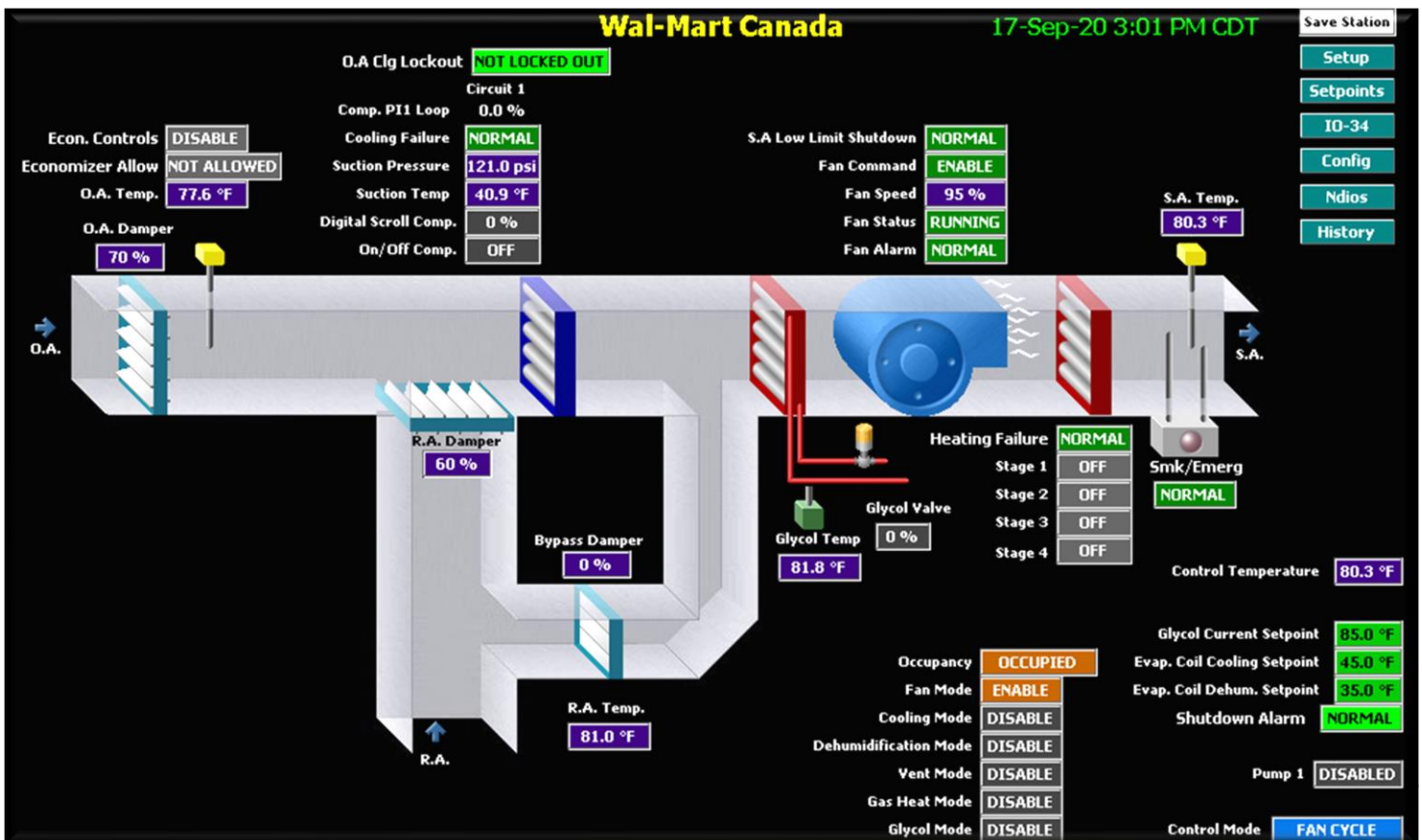


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## BECOMING FAMILIAR WITH THE JACE2 GRAPHICAL USER INTERFACE SCREENS

### THE GRAPHICAL USER INTERFACE HOME SCREEN

This screen displays the working parameters, the current mode of operation, various unit components, and the statuses of those components in real-time for the Jace2 unit. From this screen, overrides can be performed.

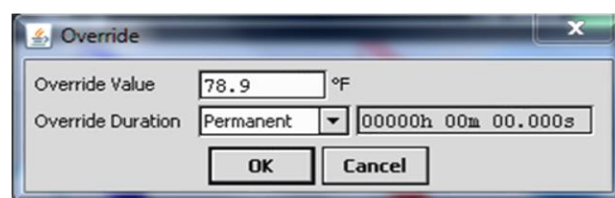


### OUTPUT AND SENSOR OVERRIDES

Right-click on the output or sensor that you want to override. For Outputs select either **Override On** or **Override Off** and for Sensors select **Set** and one of the windows below will appear depending which override is used. Set the desired Override Duration, choose the Override Value, and select the **OK** button to complete. If an Override Duration time was not set, go back to the override, and select Auto and it will return to normal. **Note:** Overrides can be performed from several different screens and will follow the same guidelines as above.



Output Override

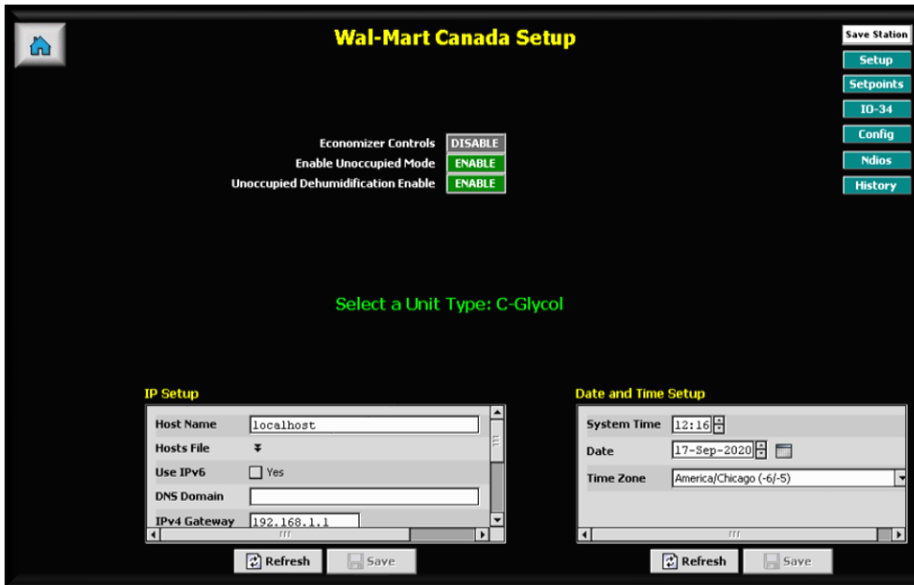


Sensor Override

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## SETUP SCREEN

Select the **Setup** button to access this screen. It will allow the user to ENABLE/DISABLE Economizer Controls, Occupied Mode, and Unoccupied Dehumidification. It will also allow users to update the System Time/Date, and update the IP address. **Note:** The **Home** button in the upper left corner can be used anytime to go back to the Home screen.



## SETPOINTS SCREEN

Select the **Setpoints** button to access this screen. It will allow users to update setpoints (if allowed) and perform some overrides. Right-click on the setpoint that you want to change, select **set** and the Set window below will appear. Set the desired setpoint value and select the **OK** button to complete. **Note:** Select the **Save Station** button to save the changes.



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## IO-34 SCREEN

Select the **IO-34** button to access this screen. It will allow users to place sensor offsets and perform some overrides.

Input/Output	Value	Offset
UI1 Supply Air Temperature	79.8 °F	0.0 °F
UI2 Outside Air Temperature	77.1 °F	0.0 °F
UI3 Return Air Temperature	80.5 °F	0.0 °F
UI4 Fan Enable	ENABLE	
UI5 Cooling Mode	DISABLE	
UI6 Dehum. Mode	DISABLE	
UI7 Supply Fan Status	RUNNING	
UI8 Occupancy	OCCUPIED	
UI9 Smoke Or Emergency Shutdown	NORMAL	
UI10 Glycol Heat 1 Mode	DISABLE	
UI11 Glycol Entering Temperature	81.4 °F	0.0 °F
UI12 Demand Ventilation	DISABLE	
UI13		
UI14 Gas Heat Enable	DISABLE	
UI15 Refrigeration Suction Pressure 1	121.0 psi	0.0 psi
UI16 Refrigeration Suction Pressure 2	Not Applied	
UI16 Water Flow Switch	Not Applied	
DO1 Supply Fan 1 Enable	ENABLE	
DO2 On/Off Compressor	OFF	
DO3 Gas Heat Stage 1	OFF	
DO4 Gas Heat Stage 2	OFF	
DO5 Gas Heat Stage 3	OFF	
DO6		
DO7 Gas Heat Stage 4	OFF	
DO8 Pump 1 Enable	DISABLED	
DO9 General Alarm	NORMAL	
DO10 Supply Fan Proving Switch	RUNNING	
AO1 Outside Air Damper	70 %	
AO2 Return Air Bypass Damper	0 %	
AO3 Return Air Damper	60 %	
AO4 Digital Scroll Compressor 1	0 %	
AO5		
AO6 Glycol Valve	0 %	
AO7 Supply Fan VFD	95 %	
AO8		

## SENSOR OFFSETS

From the above screen, the user can input sensor offsets. Right-click on the sensor offset that needs to be adjusted, select **set**, and the window below will appear. Set the desired offset and select the **OK** button to complete.



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## CONFIG SCREEN

Select the **Config** button to access this screen. It allows the user to make certain temperature/time adjustments if advised, but generally will not be used.

## NDIOS SCREEN

Select the **NdiOS** button to access this screen. It allows the user to view what is connected to the Universal inputs, Analog outputs, and Digital outputs. Unless advised there are no changes made on this screen.

Name	Type	Address	Out
UI1_SaTemp	ResistiveInputPoint	1	79.7 °F {ok}
UI2_OaTemp	ResistiveInputPoint	2	76.7 °F {ok}
UI3_RaTemp	ResistiveInputPoint	3	80.0 °F {ok}
UI4_FanEnable	BooleanInputPoint	4	ENABLE {ok}
UI5_CoolingMode	BooleanInputPoint	5	DISABLE {ok}
UI6_DeHumMode	BooleanInputPoint	6	DISABLE {ok}
UI7_SupplyFanStatus	BooleanInputPoint	7	Running {ok}
UI8_Occupancy	BooleanInputPoint	8	Enabled {ok}
UI9_SmkOrEmergShutdown	BooleanInputPoint	9	NORMAL {ok}
UI10_GlycolHeatMode	BooleanInputPoint	10	DISABLE {ok}
UI11_GlycolEntTemp	ResistiveInputPoint	11	81.7 °F {ok}
UI12_VentMode	BooleanInputPoint	12	DISABLE {ok}
UI13_HpRwTemp	ResistiveInputPoint	0	302.0 °F {fault, stale}
UI13_ERVRotation	BooleanInputPoint	0	Stopped {fault, stale}
UI14_Gas_HeatPumpMode	BooleanInputPoint	14	DISABLE {ok}
UI15_RefigSuctionPress	VoltageInputPoint	15	121.0 psi {ok}
UI16_WaterFlowSwitch	BooleanInputPoint	0	No Flow {fault, stale}
UI16_RefigSuctionPress2	VoltageInputPoint	0	-62.5 psi {fault, stale}
A01_OaDamper	VoltageOutputWritable	1	70.0 % {ok} @ 10
A02_BypassDamper	VoltageOutputWritable	2	0.0 % {ok} @ 10
A03_ReturnDamper	VoltageOutputWritable	3	40.0 % {ok} @ 10
A04_DigitalScrollCompressor1	VoltageOutputWritable	4	-0.0 % {ok} @ 9
A05_DigitalScrollCompressor2	VoltageOutputWritable	0	-25.0 % {fault, stale} @ 10
A06_GlycolValve	VoltageOutputWritable	6	0.0 % {ok} @ 10
A07_SupplyFanWFD	VoltageOutputWritable	7	95.0 % {ok} @ 10
A08_HpWaterValve	VoltageOutputWritable	0	0.0 % {fault, stale} @ def
DO1_SupplyFan1StartStop	BooleanOutputWritable	1	Enabled {ok} @ 10

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## HISTORY SCREEN

Select the History button to access this screen, then double click the store name. It will allow the user to view a list of historical information about the unit (shown below). **Note:** Double click on the desired item to get more detail.



WmCanadaMaster_v14	
Name	Description
▲ AO4_DigitalScrollCompressor1	
▲ AuditHistory	
▲ Cooling Mode	
▲ Dehum Mode	
▲ Fan Mode	
▲ Gas Heat Command	
▲ General Alarm	
▲ HGRH Command	
▲ LogHistory	
▲ Occupancy	
▲ On/Off Compressor Command	
▲ Outside Air Temp	
▲ Return Air Temp	
▲ Smoke/Emergency Shutdown	
▲ Suction Pressure	
▲ Supply Air Temp	
▲ Supply Fan Command	
▲ Supply Fan Status	
▲ Vent Mode	