



How to Disable System Components

ProfiNet

Ethernet I/P

ProfiCloud

OPC UA

eHMI

WBM (web Based management)

Other...

**in the PLCnext
for better performance**



1. Introduction:

On the PLCnext, the file `/etc/plcnext/Device.acf.settings` contains a list of environment variables and their default values. Some of these environment variables are used to enable/disable various system services on the PLC.

There are

It is possible to change the values of these environment variables, but this should not be done by editing this (or any other) system configuration file.

We can, however, copy and rename the “Device.acf.settings” file, modify the new file to ‘override’ what we do not want to operate, save the file and Reboot.

On Power On, our new file will effectively disable Those Functions we did not want to have active without affecting any of the normal PLCnext functions.

NOTE: Class 1 and Class 2 Resets on the controller will reinstate the Default settings and you will have to redo this routine to disable the unwanted features.

Prerequisite:

Have Putty (or similar) program installed, running and being able to ‘shell’ into a PLCnext Controller.



2. Procedure

- 1.** Open the directory “etc/plcnext” on the PLCnext.

cd /etc/plcnext

- 2.** Copy the Device.acf.Settings file to ‘/opt/plcnext/appshome’ location for editing

cp Device.acf.settings /opt/plcnext/appshome

- 3.** Rename the file that was just copied

a. *cd /opt/plcnext/appshome*

b. *mv Device.acf.settings Disable.acf.settings*

Note: if you want it in one long command, it would be:

cp /etc/plcnext/Device.acf.settings /opt/plcnext/appshome/Disable.acf.settings

- 4.** Open the new file (use nano):

nano Disable.acf.settings



5. Notes about the 'nano' command line editor:

When using the 'nano' command line Editor, you only have simple abilities of the keyboard. Removing large 'chunks' of data can be tedious.

To Select and Remove sections, you can do the following:

- move cursor to the beginning spot that you want to start deleting text.
- `<Alt> a`
- move Cursor with arrow keys and highlight all that you want deleted.
- `<Ctrl> k`

Alternative Note: If you put cursor at beginning of line, `<Ctrl>k` Deletes the entire line. You can delete each line you do not require.

Be careful that your spelling and syntax are correct- take your time on these Next steps.

DO NOT Modify the First 6 lines:

```
GNU nano 4.1                               Disable.acf.s
?xml version="1.0" encoding="UTF-8"?>
<AcfSettingsDocument
  xmlns="http://www.phoenixcontact.com/schema/acfsettings"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.phoenixcontact.com/schema/acfsettings.xsd"
  schemaVersion="1.0" >

  <Includes>
    <Include path="#$Soc-acf-settings" />
```

Picture #1



6. Leave the Header Section in Tact. Will remove all of the rest of the File, except for the Functions that we want to 'Override', which are contained in the "<EnvironmentVariables>" Section.

Your File should now look similar to Picture #2, with

"<EnvironmentVariables>" at Top and Bottom of the listing.

Take Careful Note: If you make a mistake, simply exit (<Ctrl>x... When asked to 'Save modified buffer' ... Press 'N' key (NO). Go back to step 4 and try again.

```
192.168.1.20 - PuTTY
GNU nano 4.1                               Disable.acf.settings
<?xml version="1.0" encoding="UTF-8"?>
<AcfSettingsDocument
  xmlns="http://www.phoenixcontact.com/schema/acfsettings"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.phoenixcontact.com/schema/acfsettings.xsd"
  schemaVersion="1.0" >

  <EnvironmentVariables>
    <EnvironmentVariable name="ARP_AXIOLINE_SUPPORT" value="$ENV_AXIOLINE_SUPPORT$" />
    <EnvironmentVariable name="ARP_INTERBUS_SUPPORT" value="$ENV_INTERBUS_SUPPORT$" />
    <EnvironmentVariable name="ARP_PROFINET_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_PROFICLOUD_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_ETHERNETIP_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_OPC-UA_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_EHMI_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_WEM_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_FWM_SUPPORT" value="true" />
    <EnvironmentVariable name="ARP_ACTIVE_PROJECT_DIR" value="$ARP_PROJECT_CURRENT_DIR$" />
  </EnvironmentVariables>

</AcfSettingsDocument>
```

Picture #2

7. Now, Reduce the File further to only include the <EnvironmentVariables> that you want to disable. In this case, I want to disable "ETHERNETIP_SUPPORT" as in Picture #3.

```
192.168.1.20 - PuTTY
GNU nano 4.1                               Disable.acf
<?xml version="1.0" encoding="UTF-8"?>
<AcfSettingsDocument
  xmlns="http://www.phoenixcontact.com/schema/acfsettings"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.phoenixcontact.com/schema/acfsettings.xsd"
  schemaVersion="1.0" >

  <EnvironmentVariables>
    <EnvironmentVariable name="ARP_ETHERNETIP_SUPPORT" value="true" />
  </EnvironmentVariables>

</AcfSettingsDocument>
```

Picture #3



8. To Disable, EthernetIP Support, we have to change value from

... "ARP_ETHERNETIP_SUPPORT" value ="true" />

To

... "ARP_ETHERNETIP_SUPPORT" value ="false" override="true" />

Our final file will now look like Picture #4.

```
GNU nano 4.1 Disable.acf.settings
?xml version="1.0" encoding="UTF-8"?>
<AcfSettingsDocument
  xmlns="http://www.phoenixcontact.com/schema/acfsettings"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.phoenixcontact.com/schema/acfsettings.xsd"
  schemaVersion="1.0" >

  <EnvironmentVariables>
    <EnvironmentVariable name="ARP_ETHERNETIP_SUPPORT" value="false" override="true" />
  </EnvironmentVariables>

</AcfSettingsDocument>
```

Picture #4

9. Save and Exit File.

- Press <Ctrl>x
- it will ask "Save modified Buffer"
- Press 'Y'.
- it will state 'File Name to Write: Disable.acf.settings'. Press <Enter>.

10. Reboot Controller and enjoy not having those features available.

By the way... if you want to 'reinstate' all features, simply delete the file we created.

rm /opt/plcnext/appshome/Disable.acf.settings