

## Installation Guide

### Description:

This is a quick guide for DeviceOn/ePaper server installation. This package will install DeviceOn/ePaper core services, EPD Hub service, Service Monitor and other system settings such as firewall.

### Prerequisite:

- ✓ Ubuntu 20.04 LTS
- ✓ System requirement: At least 8G RAM, 50 GB disk but 100 GB disk is recommended.
- ✓ Network available
- ✓ Public static IP
- ✓ Pure environment without other software installed (recommend)
- ✓ Available ports (if you have another firewall)
  - Tomcat Service: 80, 443
  - Service Monitor: 8090
  - AMQP/SSL: 5671, 5672
  - MQTT/SSL: 1883, 8883
  - FTP: 2121
  - FTP Passive Mode: 60001 ~ 60100
  - EPD Hub Service: 3000, 5853, 5854, 69, 30000 ~ 30120

## Installation

Step 1. Download the installation package. Please contact Advantech provider or download from Azure blob with the command:

Step 2. Unpack the installation package with the command:

```
tar -xvf DeviceOnEPDInstaller_<Build_Version>.tar.gz
```

<Build\_Version> must be replaced by the actual build version you have downloaded. For example, **1703**

Step 3. Go into the DeviceOnEPDInstaller directory with this command:

```
cd DeviceOnEPDInstaller_<Build_Version>
```

Step 4. List all files. You should see the following files

```
ls
```

```
advantech@VM-test:~/DeviceOnEPDInstaller$ ls
EPD_Server_Ubuntu-20.04_x64_1.11.0.run  dos2unix_cleaner.bat  run_hook.sh
autorun.config                          hook                   run_uninstall_all.sh
```

Step 4. Make the file executable with the command:

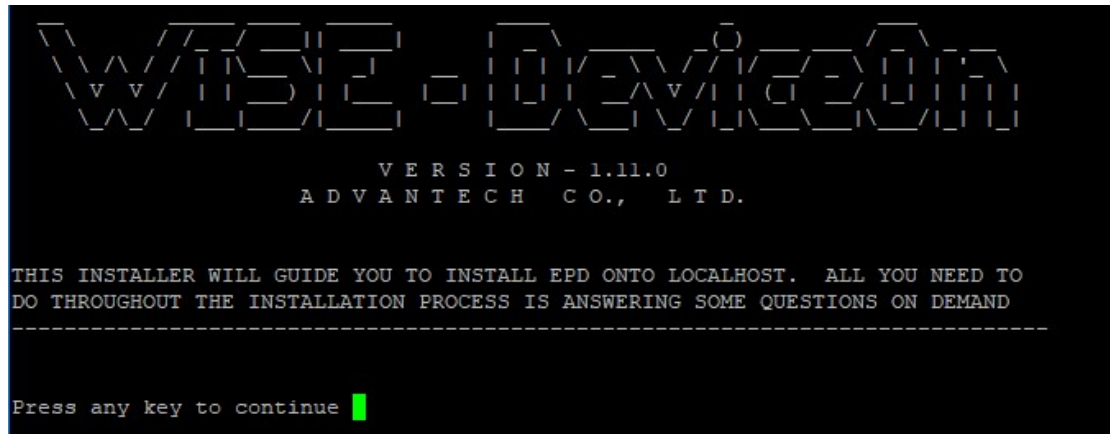
```
sudo chmod +x EPD_Server_Ubuntu-20.04_x64_<Server_Version>.run
```

Step 5. Install the package. Here we have two modes to finish this part: ask mode and silent mode.

**Ask mode** (Range from Step 5a-1 to Step 5a-9). This mode will guide you with a step-by-step procedure to setup the necessary information for DeviceOn/ePaper server.

Step 5a-1. Execute the command to start installation guide:

```
sudo ./EPD_Server_Ubuntu-20.04_x64_<Server_Version>.run
```

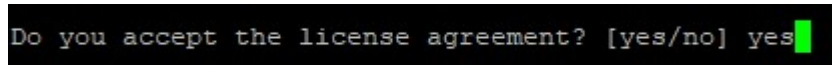


```
W I S E - D E V I C E O N
          VERSION - 1.11.0
    A D V A N T E C H   C O . ,   L T D .

THIS INSTALLER WILL GUIDE YOU TO INSTALL EPD ONTO LOCALHOST. ALL YOU NEED TO
DO THROUGHOUT THE INSTALLATION PROCESS IS ANSWERING SOME QUESTIONS ON DEMAND
-----

Press any key to continue █
```

Step 5a-2. Enter yes to continue the process.



```
Do you accept the license agreement? [yes/no] yes █
```

Step 5a-3. Then this installer will check the necessary system information it needs.

```
→ Checking running mode
  ✓ Running as install mode

→ Checking Linux distribution and version
  ✓ ubuntu-20.04: okay

→ Checking OS dependencies
  ✓ Installed: authbind
  ✓ Installed: fontconfig
  ✓ Installed: libapr1-dev
  ✓ Installed: libc6
  ✓ Installed: libcurl4
  ✓ Installed: libgcc1
  ✓ Installed: libncurses5
  ✓ Installed: libssl-dev
  ✓ Installed: libssl1.1
  ✓ Installed: libstdc++6
  ✓ Installed: libtncnative-1
  ✓ Installed: libxml2-utils
  ✓ Installed: net-tools
  ✓ Installed: openssl
  ✓ Installed: procps
  ✓ Installed: tzdata
  ✓ Installed: unzip
  ✓ Installed: uuid-runtime

→ Checking installation directory
  ✓ Installation directory: /opt/advantech/epd

→ Collecting system information
  ✓ Total RAM: 8GB
  ! Available disk: 63GB (67GB total)
  Total available disk space >= 100GB is recommended.
```

Step 5a-4. Please enter the public static IP in this step (It is important step for key functions such as OTA firmware upgrade, device connection and image transfer, but you can correct it by Service Monitor later, see the step 8).

```
→ A valid IP or host name is required.
  □ The IP or host name you input here will be used by agents to acquire
  □ connection information.
  ? What IP or name to be used for this host? 172.22.13.14
  ? Is '172.22.13.14' okay [y/n] y
```

Step 5a-5. Please enter the password for PostgreSQL database.

```
→ PostgreSQL password setup.
  □ You need to input a password for super user 'postgres'
  ? Password: *****
  ? Please enter again: *****
```

Step 5a-6. Please enter the password for Mongo database.

```
—▶ MongoDB password setup.
□ You need to input a password for user 'wisepaas' within database 'WISE-PaaS'
? Password: *****
? Please enter again: *****
```

Step 5a-7. You can choose whether to cap Mongo database with a limited disk usage, so it will recycle the disk usage and save your disk space. If you choose yes, please enter **y**. Then, enter the recommended size: **10240** (MB).

```
—▶ Turn 'capped' on or not.
□ MongoDB has a feature named 'capped'. It will recycle disk size for those
□ collections turn this functionality on.
? Do you want to enable this functionality [y/n] y
? How much 'capped' size, in MB, to be used? 10240
? Is '10240' okay [y/n] y
```

Step 5a-8. Please enter the root account for sign-in DeviceOn/ePaper. If you do not want to change, please enter **y** to continue. Then enter the password for root account.

```
—▶ EPD root email domain setup.
□ The email for the default super user is 'root@advantech.com.tw' within EPD.
□ You can accept and use this as the default. Or, you can use another domain as
□ your own.
? Do you want to use 'root@advantech.com.tw' [y/n] y

—▶ EPD portal password setup.
□ You need to input a password for super user 'root@advantech.com.tw' to login
□ EPD portal
□
□ NOTE THAT A VALID PASSWORD TO LOGIN PORTAL MUST CONTAIN:
□ 1) at least eight characters
□ 2) at least a number
□ 3) at least a lowercase letter
□ 4) at least an uppercase letter
□ 5) at least a special character but ' ', '\', and '"'.
? Password: *****
? Please enter again: *****
```

Step 5a-9. Installation is finished. You will see a message like below.

```
Installation has done (Build v1703). Please validate all services are functional.
1. Open the browser and enter the URL: http://172.22.13.14:8090
   Sign in and make sure all services are normal.
2. Open the browser and enter the URL: http://172.22.13.14
   Sign in DeviceOn/ePaper and use it.
```

**Silent mode** (Range from Step 5b-1 to Step 5b-3) This mode will install silently with a pre-defined configuration.

Step 5b-1. Please edit **autorun.config** if necessary. We will assign all passwords to P@ssw0rd and cap Mongo database to disk size of 10240 MB by default. You can also re-assign the correct static IP at this step by changing environment variable with **ANS\_SERVER\_HOST = "<Your static IP>"**, or you can just pass this step and correct it by Service Monitor later, see the step 8.

```
# DESCRIPTION
#   The server IP or hostname to be used. This IP or hostname will be used
#   for devices to establish connection with EPD server.
# MANDATORY
#   Yes
# DEFAULT
#   N/A
ANS_SERVER_HOST = "172.22.13.14"
```

Step 5b-2. Install DeviceOn/ePaper by silent mode with the command:  
**sudo ./EPD\_Server\_Ubuntu-20.04\_x64\_<Server\_Version>.run -f autorun.config**

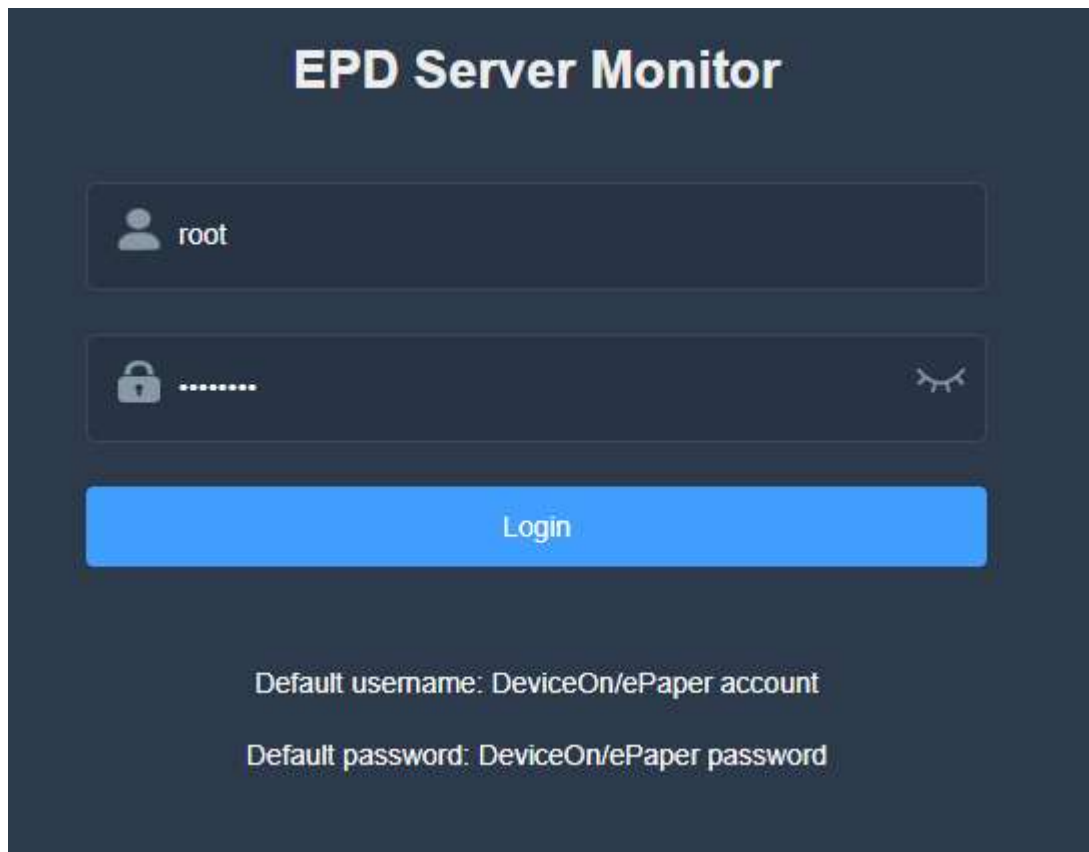
Step 5b-3. Installation is finished. You will see a message like below.

```
Installation has done (Build v1703). Please validate all services are functional.
1. Open the browser and enter the URL: http://172.22.13.14:8090
   Sign in and make sure all services are normal.
2. Open the browser and enter the URL: http://172.22.13.14
   Sign in DeviceOn/ePaper and use it.
```

Step 6. Open the browser and enter the URL:  
<http://<Your Server IP>:8090>, and sign in with default account and password.

Username: root

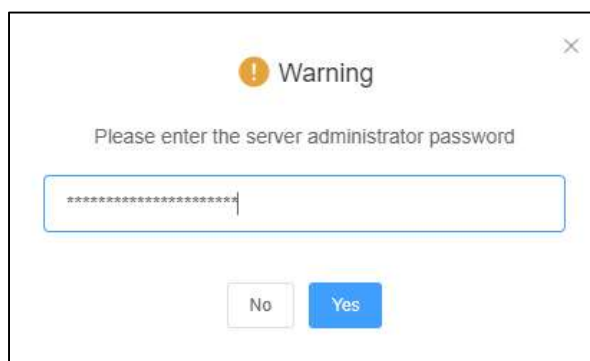
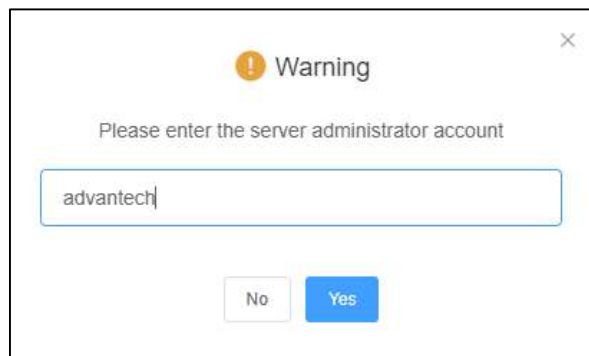
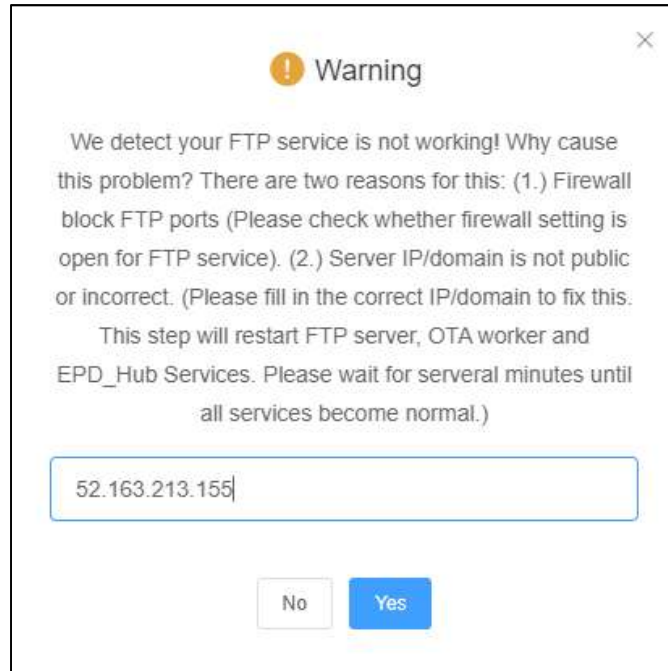
Password: P@ssw0rd



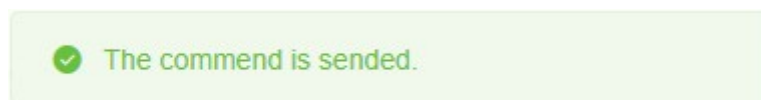
Step 7. Make sure all services are normal (Green light).



Step 8. (Optional) If server IP is not correct, the FTP service will be abnormal (Red light) and a dialog will pop up (see below). Please enter the correct IP, OS system account and password to fix this problem.



You MUST see this following message showing up.





## Upgradation

### Prerequisite:

- ✓ Your system MUST install DeviceOn/ePaper
- ✓ Upgraded version MUST higher than the installed version

Step 1. Download the installation package. Please contact Advantech provider or download from Azure blob with the command:

Step 2. Unpack the installation package with the command:

```
tar -xvf DeviceOnEPDInstaller_<Build_Version>.tar.gz
```

<Build\_Version> must be replaced by the actual build version you have downloaded. For example, **1900**

Step 3. Go into the DeviceOnEPDInstaller directory with this command:

```
cd DeviceOnEPDInstaller_<Build_Version>
```

Step 4. List all files. You should see the following files

```
ls
```

```
advantech@VM-test:~/DeviceOnEPDInstaller$ ls
EPD_Server_Ubuntu-20.04_x64_1.11.0.run  dos2unix_cleaner.bat  run_hook.sh
autorun.config                          hook                  run_uninstall_all.sh
```

Step 5. Make the file executable with the command:

```
sudo chmod +x EPD_Server_Ubuntu-20.04_x64_<Server_Version>.run
```

Step 6. Execute the command below to upgrade DeviceOn/ePaper server:

```
sudo ./EPD_Server_Ubuntu-20.04_x64_<Server_Version>.run
```

```
WSE - DeviceOn
          VERSION - 1.11.0
    ADVANTECH CO., LTD.

THIS INSTALLER WILL GUIDE YOU TO INSTALL EPD ONTO LOCALHOST. ALL YOU NEED TO
DO THROUGHOUT THE INSTALLATION PROCESS IS ANSWERING SOME QUESTIONS ON DEMAND
-----

Press any key to continue 
```

Step 6. Enter yes to continue the process.

```
Do you accept the license agreement? [yes/no] yes
```

Step 7. Enter **y** to proceed the upgradation process. Warning! This step will shutdown all running services until the whole upgrade process completed.

```
→ Checking running mode
✓ Running as upgrade mode

→ Checking Linux distribution and version
✓ ubuntu-20.04: okay

→ Checking OS dependencies
✓ Installed: authbind
✓ Installed: fontconfig
✓ Installed: libapr1-dev
✓ Installed: libc6
✓ Installed: libcurl4
✓ Installed: libgcc1
✓ Installed: libncurses5
✓ Installed: libssl-dev
✓ Installed: libssl1.1
✓ Installed: libstdc++6
✓ Installed: libtncnative-1
✓ Installed: libxml2-utils
✓ Installed: net-tools
✓ Installed: openssl
✓ Installed: procps
✓ Installed: tzdata
✓ Installed: unzip
✓ Installed: uuid-runtime

→ Gathering EPD information
✓ Version be installed: 1.9.3
✓ Version to upgrade: 1.11.0

→ Checking upgrade paths
✓ EPD can be upgraded from 1.9.3 to 1.11.0

→ Shutdown all services.
 To upgrade EPD, it's required to shutdown all running services. So EPD can't
 serves users until the whole upgrade process completed, no matter it's
 successful or failed.
? Do you want to proceed now [y/n] y
```

Step 8. Upgradation is finished. You will see a message like below.

```
Upgradation has done (Build v1900).
```

## Uninstallation

Step 1. Go into the DeviceOnEPDInstaller directory with this command:

```
cd DeviceOnEPDInstaller_<Build_Version>
```

Step 2. Make the file executable with the command:

```
sudo chmod +x run_uninstall_all.sh
```

Step 3. Please execute the command to uninstall all packages:

```
sudo ./run_uninstall_all.sh
```

```
advantech@VM-test:~/DeviceOnEPDInstaller$ sudo ./run_uninstall_all.sh

--> Uninstall Service Monitor
[PM2] Applying action deleteProcessId on app [all] (ids: [ 0 ])
[PM2] [epd-server-monitor] (0) ✓



| id | name | mode | □ | status | cpu | memory |
|----|------|------|---|--------|-----|--------|
|    |      |      |   |        |     |        |



[PM2] [WARN] Current process list is not synchronized with saved list. App epd-server-monitor differs. Type 'pm2 save'
to synchronize.
[PM2] Saving current process list...
[PM2] Successfully saved in /root/.pm2/dump.pm2
[PM2] Init System found: systemd
Removed /etc/systemd/system/multi-user.target.wants/pm2-root.service.
Removed /etc/systemd/system/multi-user.target.wants/pm2-root.service.

[PM2] Init file disabled.
[PM2] Spawning PM2 daemon with pm2_home=/root/.pm2
[PM2] PM2 Successfully daemonized
[PM2] Saving current process list...
[PM2] Successfully saved in /root/.pm2/dump.pm2
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@~2.3.2 (node_modules/pm2/node_modules/chokidar/node_modules/
fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"
any"} (current: {"os":"linux","arch":"x64"})

removed 182 packages in 1.914s
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages will be REMOVED:
 nodejs
0 upgraded, 0 newly installed, 1 to remove and 8 not upgraded.
After this operation, 93.5 MB disk space will be freed.
(Reading database ... 68257 files and directories currently installed.)
Removing nodejs (12.22.12-deb-1nodesourcel) ...
dpkg: warning: while removing nodejs, directory '/usr/lib/node_modules/npm/node_modules/node-gyp/gyp/pylib/gyp/genera
tor' not empty so not removed
Processing triggers for man-db (2.9.1-1) ...
```

Step 4. Uninstallation is finished. You will see a message like below.

```
---> Uninstall EPD_Portal
--> Uninstalling service: epd-portal
  > Stopping: epd-portal.service
  > Disabling: epd-portal.service
  > Removing: epd-portal.service
--> Uninstalling service: epd-ota-worker
  > Stopping: epd-ota-worker.service
  > Disabling: epd-ota-worker.service
  > Removing: epd-ota-worker.service
--> Uninstalling service: epd-worker
  > Stopping: epd-worker.service
  > Disabling: epd-worker.service
  > Removing: epd-worker.service
--> Uninstalling service: epd-esl-worker
  > Stopping: epd-esl-worker.service
  > Disabling: epd-esl-worker.service
  > Removing: epd-esl-worker.service
--> Uninstalling service: epd-rabbitmq
  > Stopping: epd-rabbitmq.service
  > Disabling: epd-rabbitmq.service
  > Removing: epd-rabbitmq.service
--> Uninstalling service: epd-postgresql
  > Stopping: epd-postgresql.service
  > Disabling: epd-postgresql.service
  > Removing: epd-postgresql.service
--> Uninstalling service: epd-mongodb
  > Stopping: epd-mongodb.service
  > Disabling: epd-mongodb.service
  > Removing: epd-mongodb.service
--> Uninstalling service: epd-ftp
  > Stopping: epd-ftpd.service
  > Disabling: epd-ftpd.service
  > Removing: epd-ftpd.service
--> Removing resources
>>>> ALL DONE <<<<

✓ success!
```

## Troubleshooting

1. If you have issues on the installation/upgradation process, you can collect two log files below and give them to Advantech provider to further investigation.

```
install-epd.log  
install-hook.log
```

2. If you have done the installation/upgradation process but some service is not ready, please try to restart them if necessary.



3. If you still have problems on point 2 mentioned above, you can collect service logs and give the Advantech provider to further investigation.