



eXplorerLA

Installation Guide

Ver. 2.x.x – February 2020

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Reading USB printers

Description of the scanning process of a USB printer

Reading a USB printer relies on a software called eXplorerLA (eXplorer Local Agent) to be installed on a PC connected with USB printers. This software takes care of analysing data of printers connected via USB port, up to 5 printers for each PC. The software uses the original Windows SNMP service, installed and configured on the local PC, inserting collected data into a new SNMP section with the following specifications:

- The new SNMP section that will contain printers data will have the following OID node as a root:
 - .1.3.6.1.5.1.87233.1.1.2
- The root OID has 29 child OID corresponding to 29 fields of a normal CSV, created by eXplorerLA. The child OID are the following:
 - .1.3.6.1.5.1.87233.1.1.2.1
 - .1.3.6.1.5.1.87233.1.1.2.2
 -
 - .1.3.6.1.5.1.87233.1.1.2.29
- For each child OID node, corresponding to a particular field to be analysed (for example the serial, or the toner level), there are other 5 child OID, one for each of the 5 printers that it's possible to analyse. These OIDs have the following values:
 - .1.3.6.1.5.1.87233.1.1.2.1.1
 - .1.3.6.1.5.1.87233.1.1.2.1.2
 -
 - .1.3.6.1.5.1.87233.1.1.2.1.5
- Data written on these OIDs are crypted.

Installation prerequisite

Windows SNMP service

In order to use eXplorerLA you must have the Windows SNMP service installed and properly configured. The installation procedure is different between Windows versions. After being installed, the service must be configured properly. Please refer to the next chapter "Configuring SNMP service".

Installing SNMP service on Windows XP/2003

To install the SNMP service on Windows XP/2003 you need the operating system CD. As an alternative you can use the "i386" folder for 32-bit systems, or "amd64" for 64-bit systems. This folder can be picked from an installation CD and stored on a USB key or network folder. This will help you simplifying the installation when you have a lot of PC's to configure. Once you have the installation CD, or the files it contains, please follow these steps:

1. Click **Start -> Control panel**.
2. Click **Add/Remove Programs**.
3. Click **Add/Remove Windows Components**.
4. Click on **Management and Monitoring Tools** and click on **Details**.
5. Check **Simple Network Management Protocol** and click **OK**.
6. Click **Next**.
7. When required, please provide the path to CD or system files and click **OK**.

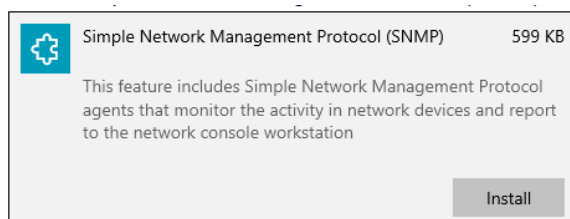
Installing SNMP service on Windows 7/2008 and Windows 8/10 (version before 1809)

For those Windows versions you don't need the installation media. Please follow these steps:

1. Click **Start**, then **Control panel**.
2. Click **Programs and Features**.
3. Click **Turn Windows features on or off**.
4. Select the option for "**Simple Network Management Protocol (SNMP)**".
5. Click **OK**. Please wait until the installation is completed.

Installing SNMP service Windows 10 (version 1809 or above)

1. Open **Settings**
2. Click **Apps**.
3. Choose **Manage optional features** under **Apps & features**.
4. Click **Add a feature**.
5. Select **Simple Network Management Protocol (SNMP)** from the list.

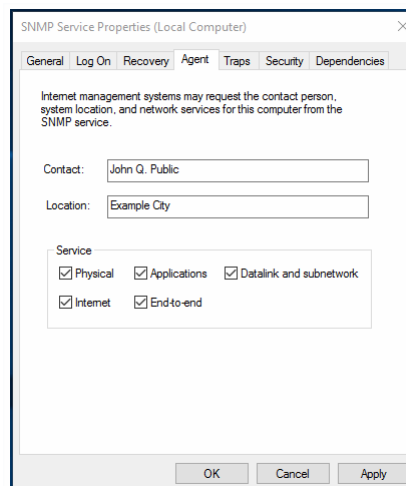


6. Click **Install** to enable SNMP on your computer.

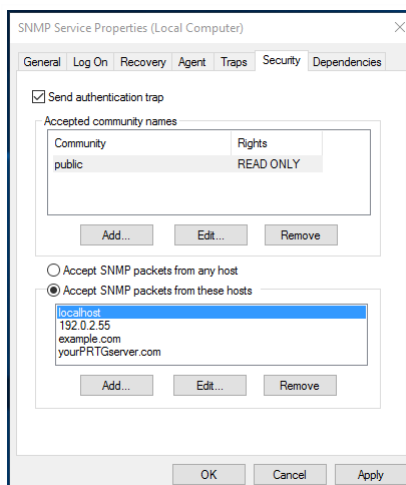
Configuring SNMP service

To configure the Windows SNMP service, please follow these steps:

1. Click **Start** then **Run/Search**.
2. Type in **services.msc** and select "run it as Administrator" then press **Enter**.
3. Search for **SNMP Service** in the service list, right click on the service, then **Properties**.
4. Select the "**Agent**" tab. For monitoring purposes, you should also check all services on the Agent tab to have all SNMP values available.



5. Select the "**Security**" tab and configure the "**Community**" field with "**public**" and select "**Accept SNMP packets from any hosts**". It is possible to secure the SNMP service using a different "Community" name and limiting the hosts than can access to the Windows station.





Installing eXplorerLA

There are two versions of eXplorerLA: "GUI", having a setup with a full graphic interface; and "silent", that doesn't require manual operations to be installed.

In both cases the installation program will copy the files in the Program folder, and will install the eXplorerLA service. This service can be found and managed in the list of system services. The installation folder also includes other files, besides the eXplorerLA.EXE needed to monitor printers:

1. eXplorerLA_{x64/x86}.DLL (windows snmp agent module)
2. eXplorerLA.INI (service configuration options)
3. TONERLOW.INI (custom PJI error codes on toner low condition)
4. VENDORVID.INI (usb VID printer producer list)

Installing/uninstalling "GUI" version

Install

Execute the setup file with admin permissions on the local machine. During the setup procedure, the user isn't required for any particular data. Please ensure that the installation path is correct and proceed by clicking "next" (we suggest not to change the default path proposed by the installer).

Uninstall

Go to the eXplorerLA installation folder, which is located here by default:

C:\Program Files\MPSMonitor\eXplorerLA

Double click on file **unins000.exe**, and confirm the uninstallation. When finished, you could cancel the **mpsmonitor** folder.

Installing/uninstalling the "Silent" version

Install

The software must be launched via the command-prompt (run as Administrator) with the following command:

```
eXplorerLA_v2.x.x_setup_silent.exe
```

Followed by a space and one of the following parameters, that represents respectively the 3 installation modes:

/I /F Installing by overwriting the .ini file, if already existing. **This mode must always be used in case it's the first installation**

/I Installing without overwriting the .ini file

The setup takes around 1 minute and no message is displayed on the screen during this time.

Uninstall

To uninstall you need to retrieve the installation setup for eXplorerLA.

On command-prompt go to the setup folder and launch the following command:

```
eXplorerLA_v2.x.x_setup_silent.exe /U
```



Check the installation

On **Windows 7/2008** systems, please click **Start** and type **services.msc** in the search field.

On **Windows XP/2003** systems, please click **Start -> Run**, type **services.msc** and click **OK**.

On **Windows 8/10** systems, please click **Start** and type **services.msc** in the search field.

The list that shows up must include the following items:

- eXplorerLA
- SNMP Service

and the status must be "**Started**".

If one service is missing, or even both of them, you need to follow the instructions above from the beginning.

If you experience any problem even after having followed all the steps herein explained, please contact our technical support.

Configuring eXplorerLA

The eXplorerLA application operates using some INI files located on default installation directory:

1. eXplorerLA.INI
2. VENDORVID.INI
3. TONERLOW.INI

They are installed with some default values that are 90% good for the purpose.

eXplorerLA.ini

The configuration file contains the following values (bold are the default):

```
[SETTING]
SERVICE_ACTIVE=true/false (Activate/Deactivate the scanning process of local printers);
SESSION_LOGON=true/false (Require/Don't require that no user is logged on the pc);
DEBUG_FILE=true/false (Enable/Disable the output of the service on a LOG file);
CSV_APPEND=true/false (Don't Overwrite/Overwrite rows on CSV file);
IO_USB=true/false (Enable/Disable the scanning of usb printers);
IO_LPT=true/false (Enable/Disable the scanning of parallel printers);
IO_REG=true/false (Enable/Disable the scanning of register keys used to store
printers data - available for custom projects only);

[EXECUTION]
TIME1=08:00 (Scanning time number 1)
TIME2=13:45 (Scanning time number 2)
...
```

Please note: there can be an undefined number of scanning times in Execution section. They only need to have the correct progressive number after "TIME" sequence, and to be outdistanced of at least 5 minutes.



In some cases, it is necessary to avoid the eXplorerLA monitoring a specific device on USB channel (eg. Zebra label printers). In this case it is possible to insert the VID/PID related to the device to skip on monitoring (up to 5 devices). No default values are loaded in this section.

```
[USBEXCLUSION]
VID=0000          (VID to exclude from usb monitoring)
PID=0000          (PID to exclude from usb monitoring)
VID1=0000
PID1=0000
...
VID5=0000
PID5=0000
```

TonerLOW.ini

eXplorerLA uses some PDL commands to inquire the USB device status. Toner low condition is grabbed from a PDL code reported back from the @ PDL USTATUS command. eXplorerLA already has many codes embedded in the executable file, but in case the monitored device is using a different PDL CODE, it is possible to insert a line in this file with the correct code number. By default, the file is containing two lines as example (01234 and 56789).

VendorVID.ini

eXplorerLA will monitor and detect only devices which the producers VIDs are present in this file. By default this file is configured with major printers manufactures

```
vid_04dd=Sharp
vid_05ca=Ricoh
vid_04a9=Canon
vid_0482=Kyocera
vid_04e8=Samsung
vid_03f0=HP
vid_04c8=Konica
vid_06bc=Oki
vid_04f9=Brother
vid_03f8=Epson
vid_043d=Lexmark
vid_0669=Oce
vid_04da=Panasonic
vid_0550=Fuji
vid_0924=Xerox
```

If the USB device's vendor VID code is not present in the above list, just add a new line and use the format "vid_xxx=producer".

Troubleshooting

Device not monitored

To check if eXplorerLA is correctly monitoring the USB device is possible to "execute" manually the application instead of waiting the TIME specified in eXplorerLA.ini file. To proceed, open a Windows DOS console (run as Administrator) and move to the eXplorerLA install path "c:\program files\mpsmonitor\explorerLA".

Manually execute the application using: **eXplorerLA.exe -r > log.txt**



This operation will execute a monitoring on all USB devices creating the file "log.txt" containing all communication performed between the Windows station and USB device. When command is completed, the file eXplorerLA.csv must not be 0 (zero) length. The **log.txt** can be used to check what was wrong during the execution of the application.

Data not exported

eXplorerLA uses the Windows SNMP service to expose data contained in eXplorerLA.csv file. So external applications have to be able to access the SNMP windows service from outside. To test if SNMP service is working properly, we suggest to install the "net-snmp" tool

[https://sourceforge.net/projects/net-snmp/files/net-snmp binaries/5.7-binaries/net-snmp-5.7.0-1.x86.exe/download](https://sourceforge.net/projects/net-snmp/files/net-snmp%20binaries/5.7-binaries/net-snmp-5.7.0-1.x86.exe/download)

in a secondary windows station and test a snmpwalk to the windows pc hosting eXplorerLA

```
snmpwalk -On -Cc -c public -v 1 xxx.xxx.xxx.xxx 1.3.6.1 > log.txt
```

where xxx.xxx.xxx.xxx is the IP address of PC with eXplorerLA and "public" is the SNMP community configured above. The file log.txt will contains all OIDs exposed by Windows OS itself plus, at the end, the OIDs exposed by eXplorerLA. In case no data are returned from the snmpwalk command, log.txt file is empty, please check:

1. **Firewall** is not blocking the SNMP service (udp port 161)
2. Windows SNMP service is started in **services.msc** utility

It might be useful to try a "local walk", installing the net-snmp tool package on a workstation hosting eXplorerLA package and execute:

```
snmpwalk -On -Cc -c public -v 1 127.0.0.1 1.3.6.1 > log.txt
```

With this command it's possible to check if the SNMP service is working properly: if so, the issue doesn't lie in the local agent or the workstation.