

编程示例：使用 PyVISA 列出已连接的 VISA 兼容资源

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联系鼎阳： market@siglent.com 或 拨打免费电话 400-878-0807

PyVISA 是一种软件库，能使 Python 程序通过不同的总线连接和控制计算机的资源（通常是仪器），总线包括：GPIB, RS-232, LAN 和 USB。

此示例浏览并列出了可用资源。

它需要安装 PyVISA（有关更多信息，请参阅 PyVISA 文档）

```
#Example that scans a computer for connected instruments that
```

```
#are compatible with the VISA communication protocol.
```

```
#
```

```
#The instrument VISA resource ID for each compatible instrument
```

```
#is then listed.
```

```
#
```

```
#
```

```
#Dependencies:
```

```
#Python 3.4 32 bit
```

```
#PyVisa 1.7
```

```
#
```

```
#Rev 1: 08302018 JC
```

```
Import visa
```

```
Def main():
```

```
    rm = visa.ResourceManager()
```

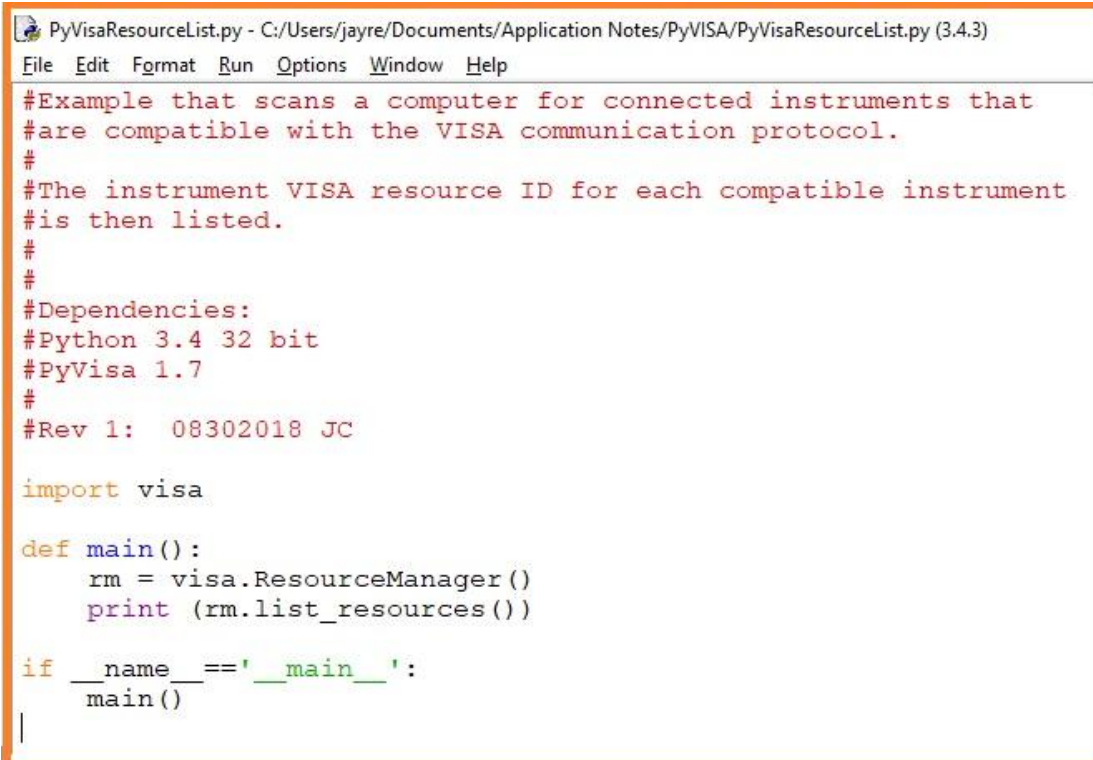
```
    print(rm.list_resources())
```

```
If __name__ == '__main__':
```

```
    main()
```

```
*****
```

这是代码：



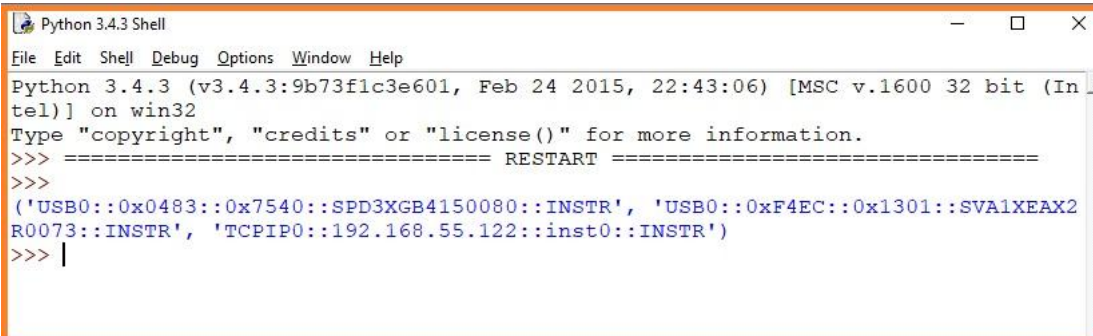
```
PyVisaResourceList.py - C:/Users/jayre/Documents/Application Notes/PyVISA/PyVisaResourceList.py (3.4.3)
File Edit Format Run Options Window Help
#Example that scans a computer for connected instruments that
#are compatible with the VISA communication protocol.
#
#The instrument VISA resource ID for each compatible instrument
#is then listed.
#
#
#Dependencies:
#Python 3.4 32 bit
#PyVisa 1.7
#
#Rev 1: 08302018 JC

import visa

def main():
    rm = visa.ResourceManager()
    print (rm.list_resources())

if __name__ == '__main__':
    main()
|
```

这是扫描的结果：



```
Python 3.4.3 Shell
File Edit Shell Debug Options Window Help
Python 3.4.3 (v3.4.3:9b73f1c3e601, Feb 24 2015, 22:43:06) [MSC v.1600 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ===== RESTART =====
>>>
('USB0::0x0483::0x7540::SPD3XGB4150080::INSTR', 'USB0::0xF4EC::0x1301::SVA1XEAX2
R0073::INSTR', 'TCPIP0::192.168.55.122::inst0::INSTR')
>>> |
```

每个连接的仪器返回一个特定格式的字符串，称为 VISA 资源 ID。

资源 ID 格式如下：

‘通信/板类型 (USB, GPIB 等) ::资源信息 (供应商 ID, 产品 ID, 序列号, IP 地址等) ::

资源类型'

在响应中，每个资源都用逗号分隔。因此，我们在此示例中列出了三种资源：

'USB0 :: 0x0483 :: 0x7540 :: SPD3XGB4150080 :: INSTR' - 这是通过 USB(USB0)

连接的电源 (SPD3X)

'USB0 :: 0xF4EC :: 0x1301 :: SVA1XEAX2R0073 :: INSTR' - 这是一个通过 USB (USB0) 连接的矢量网络分析仪 (SVA1X)

'TCPIP0 :: 192.168.55.122 :: inst0 :: INSTR' - 这是一台通过 LAN 使用 IP 地址 192.168.55.122 的 TCPIP 连接的仪器