# How to list active network endpoints on the system (TCP & UDP - IPv4) (CppNetworkAct)

# Introduction

This sample shows the TCP and UDP endpoints on the current system. This sample only covers IPv4 endpoints.

## Running the Sample

The sample does not take any commandline arguments from users. Just launch the exe and output will be displayed.

## Using the Code

This sample uses IP Helper set of APIs and also few winsock2 APIs to perform the task. GetExtendedTcpTable() and GetExtendedUdpTable() are used for this sample.  
Two main functions are designed in this sample, one for listing TCP endpoints and one for UDP endpoints.  
 GetTcpConnections();  
 GetUdpConnections();

The sample output is similar to output from netstat (-aon)

Sample output -

Number of TCP end points (IPv4) - 38

PID LocalAddr LocalPort RemoteAddr RemotePort ConnState  
 === ========= ========= ========== =========== ========

4 0.0.0.0 80 0.0.0.0 0 LISTEN  
 1004 0.0.0.0 135 0.0.0.0 0 LISTEN  
 4 0.0.0.0 445 0.0.0.0 0 LISTEN  
 668 0.0.0.0 1026 0.0.0.0 0 LISTEN  
 1036 0.0.0.0 1027 0.0.0.0 0 LISTEN  
 1144 0.0.0.0 1029 0.0.0.0 0 LISTEN  
 744 0.0.0.0 1030 0.0.0.0 0 LISTEN  
 4 0.0.0.0 5357 0.0.0.0 0 LISTEN  
 4 0.0.0.0 47001 0.0.0.0 0 LISTEN  
 728 0.0.0.0 65166 0.0.0.0 0 LISTEN

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Number of UDP end points (IPv4)- 61

PID LocalAddr LocalPort  
 === ========= ==========  
 1100 0.0.0.0 123  
 1144 0.0.0.0 500  
 1352 0.0.0.0 3702  
 4896 0.0.0.0 3702  
 1352 0.0.0.0 3702  
 4896 0.0.0.0 3702  
 1144 0.0.0.0 4500  
 1228 0.0.0.0 5355  
 1352 0.0.0.0 54225

## More Information

APIs used- GetExtendedTcpTable function -

<http://msdn.microsoft.com/en-us/library/windows/desktop/aa365928(v=vs.85).aspx>

GetExtendedUdpTable function -

<http://msdn.microsoft.com/en-us/library/windows/desktop/aa365930(v=vs.85).aspx>