

Problem receiving multicast packets

Source:

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I've got a strange problem receiving multicast packets in a C# application. What's strange is that it works *sometimes* but not always.

I create a socket, call `bind()`, set the multicast socket option and then fire off a thread that calls `receiveFrom()` in a loop. This works sometimes, but other times it'll get into a funk where the `receiveFrom()` call doesn't return even though a packet trace capture (Ethereal) shows that the multicast packet was received.

Here's where I'm creating the socket and setting up the thread:

```
private void createListener()
{
    createListenerSocket();

    _listenerThread = new Thread(new ThreadStart(listenerProc));
    _listenerThread.Name = "Multicast Listener";
    _listenerThread.IsBackground = true;
    _fRunning = true;
    _listenerThread.Start();
}

private void createListenerSocket()
{
    IPEndPoint iep = new IPEndPoint(IPAddress.Any, _nGroupPort);
    int nTTL = AppSettings.Instance.LAN.MulticastTTL;
    _socket = new Socket(AddressFamily.InterNetwork, SocketType.Dgram,
        ProtocolType.Udp);
    _socket.Bind(iep);
    _socket.SetSocketOption(SocketOptionLevel.IP,
        SocketOptionName.AddMembership,
        new MulticastOption(_groupAddress));
    _socket.SetSocketOption(SocketOptionLevel.IP,
        SocketOptionName.MulticastTimeToLive, nTTL);
}
```

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```
}
```

And here's the loop where I'm receiving and processing the packets.

```
private void listenerProc()
{
    IPEndPoint iep = new IPEndPoint(IPAddress.Any, 0);
    EndPoint ep = iep;
    byte[] recvBuff = new byte[8192];
    int nBytes;
    while (_fRunning)
    {
        nBytes = _socket.ReceiveFrom(recvBuff, ref ep);

        if (isFromMyself((IPEndPoint)ep))
        {
            logMessage("Packet was sent by me. Ignoring.", TraceLevel.Verbose);
            continue;
        }

        logMessage("listenerProc - Received " + nBytes + " bytes from " +
            ep.ToString(), TraceLevel.Verbose);
        IPEndPoint iepRemote = (IPEndPoint)ep;
        processPacket(getMessageBytes(recvBuff, nBytes), iepRemote);
    }
}
```

So, to reiterate, I've verified that the packet is being recieved by my NIC and is being sent to the proper multicast address. In my case the address is "230.2.1.75" with a TTL of 2. But, most of the time, the "_socket.ReceiveFrom()" never returns. Sometimes this works just fine.

Does anyone see what I'm doing wrong? (I'm hoping Rich Blum sees this :-)

Thanks,
Terry
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