Re: TCP/IP file transfer and a router

Source: http://coding.derkeiler.com/Archive/Java/comp.lang.java.programmer/2007−04/msg02197.html

- *From*: "Karl Uppiano" <karl.uppiano@xxxxxxxxxxx>
- *Date*: Sun, 22 Apr 2007 20:26:09 GMT

<aca04pds@xxxxxxxxxx> wrote in message
news:1177256895.141267.214920@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

> Hi
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> I'm trying to create a Java program that can send a file from 1
> Windows PC to another over a TCP/IP connection. As many people use
> [wireless] routers, how can I create a TCP connection to PCs that are
> connected to the internet via a router? The router has an IP and then
> each PC connected to that has its own IP for their local network. How
> would the router know which PC is the right one to send the data to?

Is this a peer−to−peer network, or do you have a central server? The latter would be much easier to manage.

In a peer−to−peer configuration, you might need to dynamically configure the router to open and close ports, and so on. Several standards exist for doing things like this, but it is far from foolproof. UPnP (Universal Plug 'n' Play) is one, but everyone would need routers that support the protocol. Furthermore, UPnP is widely regarded as a security risk, and enabling it is not recommended. Finally, you might discover that successfully configuring UPnP from your application is a serious development challenge in itself.

Depending on how loosely coupled your network is, a Virtual Private Network (VPN) would allow you to treat the entire collection of PCs as if they were on the same LAN, considerably simplifying your development problem. But, creating and maintaining a VPN might be problematic if the relationships between peers is casual or ad−hoc.

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