

Re: Multiple broadcasts

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Arkady Frenkel <arkadyf@hotmail.com> wrote:

> "Christoffer Bergman" <christoffer.bergman@audiodev.com> wrote in
> message news:82C75297-08D9-4573-8B50-F535E504111F@microsoft.com...

>> I want to make a broadcast on my subnet, and I have written it like
>> this:

[...]

>> The question is, will this be broadcasted on all my network cards,

>> or just one of them? I read an article that said that there are no

>> standard here. According to

>> that article, BSD had implemented broadcast so that it was

>> only broadcasted on the first available network card.

>> How does it work for Windows?

I'm pretty sure that's a broadcast is only sent on one interface in Windows. I don't know where exactly the stack came from (or how), but it behaves a lot like the BSD one.

>> If it is only broadcasted on the first network card, how do I make it
>> broadcast on ALL available cards in the computer?

>>

When using broadcast, bind a socket to each local IP Address (maybe also checking whether any of the addresses are on the same interface) and send each packet out of each.

> I think (never try that) that broadcast will be send from adapter

> which have lowest metric (or first if equal) in route table.

> If my proposition correct , you can change (increase) after send

> that metric on adapter you just send and try next time , it have to

> be sent from next one. Try and tell us the results.

>

And change the routing of all other traffic (unicast etc) too? Yikes!

See my discoveries on how the interface to send a multicast packet on is chosen, at

<http://groups.google.co.uk/groups?hl=en&lr=&ie=UTF-8&oe=UTF-8&safe=off&selm=0BDia.1372%240i4.7501%4>

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microsoft.public.win32.programmer.networks: Re: Multiple broadcasts

broadcast might behave something the same... However there's apparently only ever one 255.255.255.255 route in the table though ("route print"). I wonder whether this is all covered in Microsoft's tcpip2000.doc.

By the way, there are only a few good reason today to use broadcast rather than multicast. One possiblity is if you are communicating with some embedded device with a very slim TCP/IP stack that doesn't implement multicast receive (but does do broadcast). As well as all the good reasons to use multicast for its effect on the network etc (network load, CPU load, for future upgrade to IPv6, ability to scale off the local segments in the future if required) the programming of each is similar in scale. Though you've already written the broadcast code. :-)

* Broadcast:

** sender:

setsockopt(SO_BROADCAST)

sendto(255.255.255.255)

** receiver:

setsockopt(SO_BROADCAST) -- If KB197511/KB154460 are to be believed.

recvfrom()

* Multicast

** sender:

sendto(239.255.yy.zz etc)

** receiver:

setsockopt(IP_ADD_MEMBERSHIP <same group address>)

recvfrom() etc

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Please follow-up in the newsgroup for the benefit of all.