

[\[Team LiB \]](#)[◀ PREVIOUS](#)[NEXT ▶](#)

20.6 Summary

Broadcasting sends a datagram that all hosts on the attached subnet receive. The disadvantage in broadcasting is that every host on the subnet must process the datagram, up through the UDP layer in the case of a UDP datagram, even if the host is not participating in the application. For high data rate applications, such as audio or video, this can place an excessive processing load on these hosts. We will see in the next chapter that multicasting solves this problem because only the hosts that are interested in the application receive the datagram.

Using a version of our UDP echo client that sends a broadcast to the daytime server and then prints all the replies that are received within five seconds, we looked at race conditions with the `SIGALRM` signal. Since the use of the `alarm` function and the `SIGALRM` signal is a common way to place a timeout on a read operation, this subtle error is common in networking applications. We showed one incorrect way to solve the problem, and three correct ways:

- Using `pselect`
- Using `sigsetjmp` and `siglongjmp`
- Using IPC (typically a pipe) from the signal handler to the main loop

[\[Team LiB \]](#)[◀ PREVIOUS](#)[NEXT ▶](#)