



# Tech Info Library

## Power Macintosh 6100 DOS Compatible & Attachmate GW (6/95)

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TOPIC -----

I need to know if there are any issues between a PowerMacintosh 6100 DOS Compatible computer and an Attachmate Gateway. I'm involved in a joint project which requires access to a Gupta server through an Attachmate gateway. We are using Windows 3.1 with IBM's LAN Support Program v1.38.

An NDIS driver is required. Everything appears to load OK, with no visual errors - LSL, MACODI, ODINSUP, NETBIND, and so on.

We have reviewed relative files (CONFIG.SYS, AUTOEXEC.BAT, NET.CFG) and verified there are no obvious flaws. (4 frame types active (802.3, 802.2, SNAP & II), Buffers 8, 1600, Mempool 4096.)

When running an Attachmate terminal session or the Gupta workstation software an error occurs indicating the gateway cannot be found (errors 510 & 598 during the terminal session). It almost appears that the ODINSUP shim is not working as a true NDIS driver.

Do you have any idea on what is wrong, and what can be done to make this work?

DISCUSSION -----

Attachmate has determined there is a timing related issue with LSL and MACODI when working with their gateway products. It is important to note that this issue is not specific to the MACODI driver, as Attachmate has reported problems with 3Com, Asanté, and Shiva products to name a few. The actual problem is that MACODI is calling an API synchronously, and when it receives no answer, it stays hung. This is a very simplified version of the problem. Suffice it to say a change is needed to solve the problem, we have no time line for any changes. In the meantime, it has been determined that Novell's SAA Gateway product works fine, so that may be an option.

Here is the technical summary of the problem:

The problem occurs when the synchronous call, `Get_local_target`, is issued by `IPXODI`. This call generates a RIP request packet on the network. The call is issued in response to a `SPX_Establish` connection being sent from the gateway. Since the call is entered synchronously, meaning no other interrupts should be processed until the call completes, the session appears to hang since the call does not complete. The reason the call does not complete seems to be an issue with how the `MACODI.COM` driver handles reentrancy. An ESR, Event Service Routine, is normally entered with interrupts disabled, however once an `IPXSendPacket` is sent down to the LSL the LSL will re-enable interrupts allowing reentrancy into any ESR that called `IPXSendPacket`. The two main ways to protect an ESR from this is to provide a stack for the exclusive use of the ESR or to provide a reentrancy queue.

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