

To: Distribution
From: D. M. Wells
Date: 03/16/72
Subject: Instructions for operating the Multics ARPA Network Software.

This Multics Staff Operating Note obsoletes MOSN-189 and MOSN-201.

This document provides the information necessary for bringing up the ARPA Network on Multics, for shutting it down, and for recovering from errors detected by it.

STARTING UP THE NETWORK SOFTWARE

The Network Daemon is a process which manages the Multics interface to the ARPA Network. For the time being, this user must be logged in by hand (Network_Daemon.CNet) in a manner similar to the SysDaemons. (Eventually, it will be logged in as a consoleless process during system initialization). All necessary Network Daemon initialization is performed by a startup exec_com, so it will only be necessary for the operator to do the following:

- 1) Verify that the IMP button on the Peripheral Switch is on GIOC-A. THIS SHOULD ALWAYS BE CHECKED BEFORE LOGGING IN THE NETWORK DAEMON.
- 2) Dialup the Network Daemon and type on it:

```
login Network_Daemon
```
- 3) When requested to, respond with the password.
- 4) If no error messages are noticed during the subsequent start_up exec_com (Pay particular attention to the "nc ni 0" and "net_super\$net_init" lines), the operator should go to the initializer console and type:

```
exec network
```

This will initialize the Network portion of the Answering Service. This must be done after the Network Daemon is successfully logged in. The Initializer should print out several messages indicating that various lines have been

attached.

- 5) The Network should now be up and running normally.

TAKING DOWN THE ARPA NETWORK

When the Network must be shutdown for some reason (Multics shutting down, Network being used on the Development machine, etc.), the following procedure should be followed:

- 1) At the initializer, type:

```
exec net_remove
```
- 2) At the Network Daemon, type:

```
nc ni 0
```
- 3) After the ready message, type:

```
logout
```
- 4) The Network is now shutdown.

RECOVERING AFTER NETWORK RELATED ERRORS

Network related errors will usually be indicated by errors being reported on the BOS console. If multiple errors are reported (at a rate of approximately 3 messages per minute), the operator should attempt to contact one of the people listed at the end of this MOSN. If unable to contact one of these people or if a "Network must be re-initialized" message is noted on either the initializer or the Daemon console, attempt to re-initialize the Network per the following instructions:

- 1) At the initializer, type:

```
exec net_remove
```
- 2) At the Network Daemon, type:

```
nc ni 0
```
- 3) After the ready message, type:

```
new_proc
```
- 4) Follow the instructions for bringing up the Network listed above.

- 5) If errors continue to be detected after the Network is re-initialized, follow the instructions for taking down the Network.

PERSONNEL RESPONSIBLE FOR NETWORK MAINTENANCE

Any problems should be reported to one of the following persons:

<u>Person</u>	<u>MIT Extension</u>
Mike Padlipsky	x6006
Raj Kanodia	x6007
Ed Meyer	x6006
Doug Wells	x6007