# Using Static IP Between Linux Host and DVEVM

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**ABSTRACT**

The typical development environment for the TMS320DM644x EVM devices, also known as the digital video evaluation module (DVEVM), involves connecting a host workstation to the target EVM. This environment allows for the bulk of the development to be done in the more powerful host hardware and transferred quickly (via connection medium) to the target EVM for testing.

The most popular target-host development environment supported for the DVEVM is based on the Linux® operating system; this involves running Linux on both the host workstation and the target DVEVM. There are many ways to connect the target and the host; for example, they can be plugged into a corporate network, connected into their own private LAN, or connected directly using static internet protocol (IP) addresses.

This document outlines the process of connecting a host Linux workstation to a target Linux DVEVM using a static IP address. This method was chosen because it involves less hardware (e.g., no router necessary), there are fewer variables, and it provides a simple approach to connecting the target and the host.

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In this section, the Red Hat Enterprise Linux 4.0 (RHEL 4.0) was chosen as the Linux distribution on the host since this is the distribution of choice recommended by TI. Note that the Linux host static IP is set to 192.168.1.40 in Figure 1.

1.  Connect the DVEVM to the Linux host workstation with an Ethernet cable. Most modern computers support connecting directly from the DVEVM to a Linux computer without the need of a crossover cable or routers/hubs.

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2.  On the host Linux VMware image:
    a.  Go to *System Settings → Network*
    b.  Double click on the profile line. When the *Ethernet Device* dialog box comes up, select the *Statically set IP addresses* bullet and fill in the *Manual IP Address Settings* according to the example shown in Figure 1.
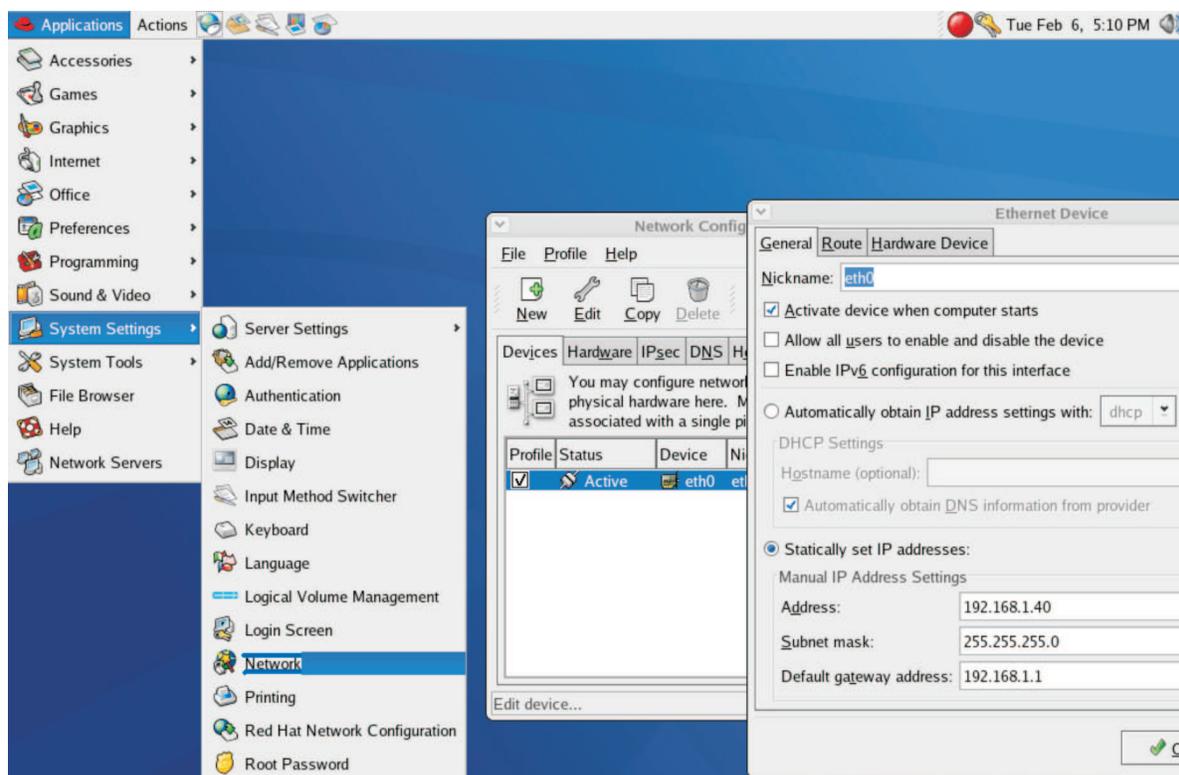


**Figure 1. How to Set Static IP on Linux Host Workstation**

## 2    Setting up the Target DVEVM

There are many options on the target side; two of the most common ones are presented here.

*   This setup is common during the development phase. To boot the Linux kernel from TFTP and the file system from NFS, the u-boot environment variables should look like the example shown in Figure 2.
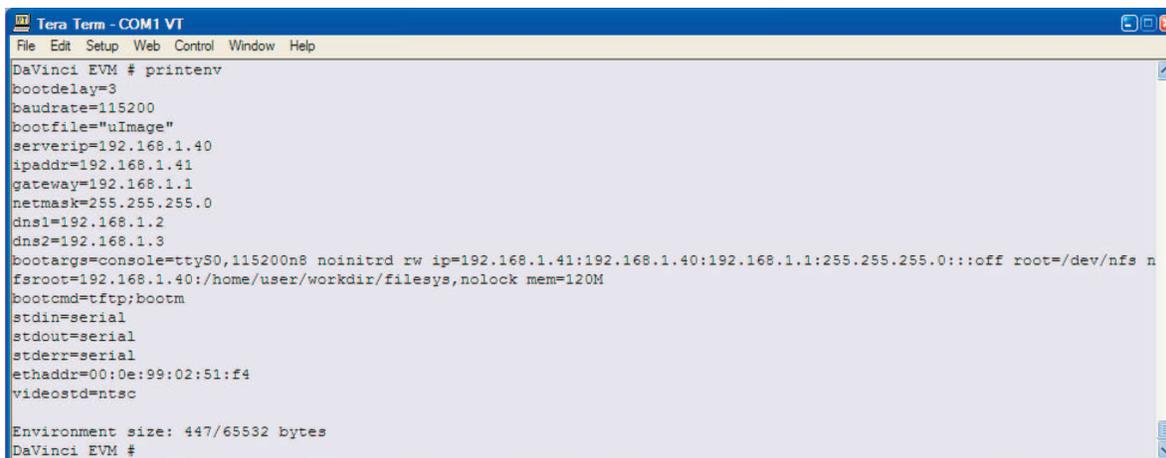


**Figure 2. u-boot Environment for Booting Linux Kernel via Host TFTP**

- This setup is common during the design completion phase. To boot the Linux kernel from NOR Flash and the file system from HDD, the u-boot environment variables should look like the example shown in Figure 3.
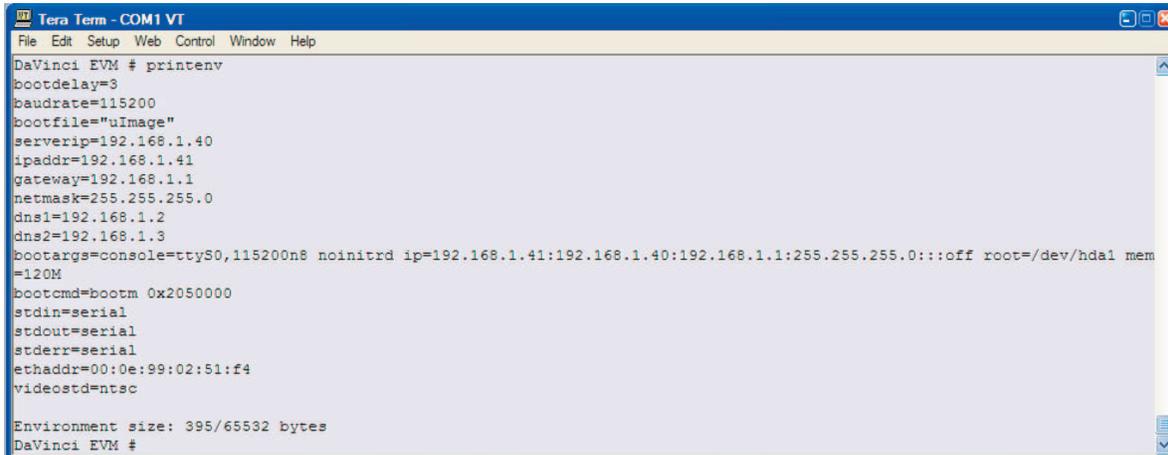


**Figure 3. u-boot Environment for Booting Entirely From EVM (no dependence on the host)**

# IMPORTANT NOTICE