PetaLinux Flexible NFS Root with XVC

Introduction

Overview

Prerequisites

TFTP Server

Install TFTP Server

To install the TFTP server, run the following commands:

```
sudo apt update
sudo apt install tftpd-hpa
```

Create TFTP Root Directory

Create a directory for the TFTP server with the following command:

```
sudo mkdir /tftpboot
```

Change the TFTP Server Directory's Permissions

Change the directory's permissions with the following commands:

```
sudo chown nobody:nogroup /tftpboot
sudo chmod 777 /tftpboot
```

Configure TFTP Server

Edit the TFTP server configuration file with the following command:

```
sudo nano /etc/default/tftpd-hpa
```

If necessary, change the following lines:

```
TFTP_USERNAME="tftp"
TFTP_DIRECTORY="/tftpboot"
TFTP_ADDRESS="0.0.0.0:69"
TFTP_OPTIONS="--secure"
```

Restart TFTP Server

After changing the configuration file, restart the TFTP server with the following command:

```
sudo systemctl restart tftpd-hpa
```

Verify TFTP Server

To verify that the TFTP server is running, run the following command:

```
sudo systemctl status tftpd-hpa
```

Start TFTP Server

If the TFTP server is not running, start it with the following command:

```
sudo systemctl start tftpd-hpa
```

Start TFTP Server on Boot

To start the TFTP server on boot, run the following command:

```
sudo systemctl enable tftpd-hpa
```

NFS Server

Prepare the Hardware

Block Design Example

Debug Bridge Configuration

System ILA Configuration

Create a PetaLinux Project

PetaLinux Project

Create a PetaLinux Project

Device Tree Configuration

PetaLinux Configuration

Root filesystem type

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Create Application

Setup XVC Server

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Prepare SD Card

Prepare NFS Root

First Boot

U-Boot CLI

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Start XVC Server

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Hardware Manager

Hardware Targets

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