UOS System Simulator

Table of contents

Title Page

UOS System Simulator User's Guide

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Introduction

Introduction

The UOS System Simulator is a simulator of system hardware for UOS that allows UOS to run as a process under Microsoft Windows. It also provides features to allow for testing.

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Main Window

The main window for the UOS Simulator resembles the following:

The window has the following components:

Menu (long the top)
Console Pane
Status Bar (along the bottom)

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Menu
Main Menu

The main menu controls the general operation of the program. It has the following sub-menus:

File - General operations
Redirection - Input and output redirection
Test - Testing

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File menu
File

The File menu contains the following options:

Boot
Configure
Exit

File | Boot

File | Boot

This menu item boots from the default device (which is a ROM image). This is equivalent to pressing the reset button on your PC.

File | Configure

File | Configure

This menu is used to configure the simulated hardware environment. It brings up the Configuration dialog, which has two tabs:

Devices
RAM

Devices

Configuration Dialog - Devices Tab

The Devices tab allows you to define the devices available on the simulated system.

This tab has a grid on the left which shows the currently configured devices. The tab has four columns:

Type - The type of the device. SERIAL indicates a serial terminal (the system console). DISK is a virtual disk,

Controller - The controller. Each device must have a controller, which is given an index starting at 0.

Unit - The unit number. Each controller can have up to 65,536 devices, starting with 0. Only one device is allowed for a given controller/unit combination.

4 - The fourth column shows information about the device. "*console*" indicates the system console. For disks, the value indicates the file name that contains the disk's contents.

Note that you can double-click any of the disks and change the file associated with them in the file open dialog that opens up.

On the right side are buttons that allow the device configuration to be modified.   The buttons are:

Add Unit
Clear All
Remove All

Configuration Dialog - Add Unit Button

Pressing this button adds a new device to the system. This brings up the Add device dialog.

You can choose the device type, controller number, and unit number. If the type of the device is DISK, the media edit is where the file name is shown. You can press the Browse button to select an existing file, or you can press Create to create a new file to hold a virtual disk.

You can press OK to add the new device or Cancel to abort the add.

Create Disk dialog

This dialog is used to specify the virtual disk characteristics for a new virtual disk.

Press Browse to choose a disk/folder where to create the new file. The File name edit is where the file name is entered. The Size drop-down allows you to select the size of the virtual disk. The size can be any size from 1 Mb to 2 Gb. The Sector size drop-down allows you to select the sector size for the virtual disk. This size can be any power of 2 from 256 to 8192.

Press the Create button to create the disk. Press the Cancel button to abort the creation process.

Clear All

Configuration Dialog - Clear All Button

Pressing this button disconnects all the disks from the disk controllers. The units remain but have no associated files.

Clear All

Configuration Dialog - Clear All Button

Remove all

Configuration Dialog - Remove all Button

Pressing this button removes all of the devices. However, the console can never be removed.

RAM

Configuration Dialog - RAM tab

The RAM tab of the configuration dialog is used to adjust the memory.

The spin edit is used to define the total RAM available on the simulated system. The default is 256 Mb. The maximum available depends upon various factors, but on a 32-bit Windows system, this will never exceed (or even reach) 2 Gb.

File | Exit

File | Exit

This option exits the program.

Redirection menu

Redirection

This menu's sub-menus are used to redirect console input and output. Redirection can be used to test UOS and Init.

This menu has two items:

Keyboard from File
Output to File

Keyboard from File

Redirection | Keyboard from file

Choosing this menu option brings up a dialog which allows you to choose a file that will serve as keyboard input. Each character in the file is treated as if it were coming from the console keyboard. Note that CR/LF combinations are treated as a single CR from the keyboard.

Output to file

Redirection | Output to file

Choosing this menu option brings up a dialog that allows you to specify a file where all output to the console is copied. Output to the console still shows on the console, but it is also written to the specified file.

Test Menu

Test

This menu contains various test options. Using these may cause the program to go into a tight loop that cannot be exited.

Help Menu

Help

The help menu provides documentation and information.

This menu has two items:

Help
About

Help | Help

Help | Help

Choosing this menu item will bring up the UOS Simulator documentation.

Help | About

Help | About

Choosing this menu option shows the current version of the UOS Simulator and any other relevant data.

Console Pane

Console Pane

This pane shows the text output to the console. It serves (in conjunction with the keyboard) as the console terminal for the UOS simulator hardware.

Status Bar

Status Bar

The think strip at the bottom of the application is the status bar. Various status messages can be shown on it.