How to speed up boot time in LinPAC?

Applies to:			No. L1-001
Platform	Software operating system	OS version	Classification
LP-8x4x	Debian	All version	Product Functionality
LP-2000/5000 series LP-8x2x LX-8000/9000 series	Ubuntu		

User can make your LinPAC boot faster by disabling a system service, the following will show how it works on LP-8x4x and LP-8x2x (also available for LP-2000, LP-5000, LX-8000, LX-9000) series:

❑ Debian operating system - LP-8x4x for example

Step 1: Use the '**ls**' command to check which service is enabling now, as illustrated in Figure 1.
Command: # ls /etc/rc<x>.d // <x> for run level

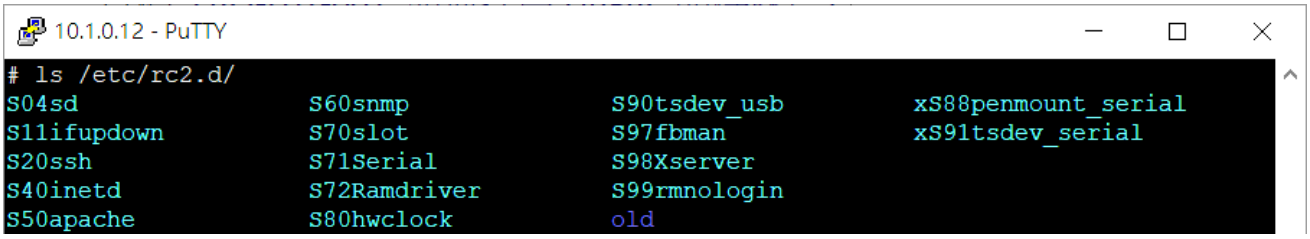


Figure 1

A "run level" is an operation mode that is used to determine which programs are executed during system startup. The default run level for the LP-8x4x is level 2.

Scripts in ***/etc/rc<x>.d/*** are all symbolic links whose targets are located in ***/etc/init.d/*** . The format of naming these links is *<S, xS or K> <2-digit-number> <original-name>*. The 2-digit-number determines the order in which the scripts are executed. The lower numbered file will executed earlier.

Scripts prefixed with an *S* will start on that run level. In contrast, those prefixed with either a *K* or an *x* will stop.

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Step 2: To disable a script from automatically starting, please rename the symbolic link with prefix *K* or *x*, as illustrated in Figure 2.

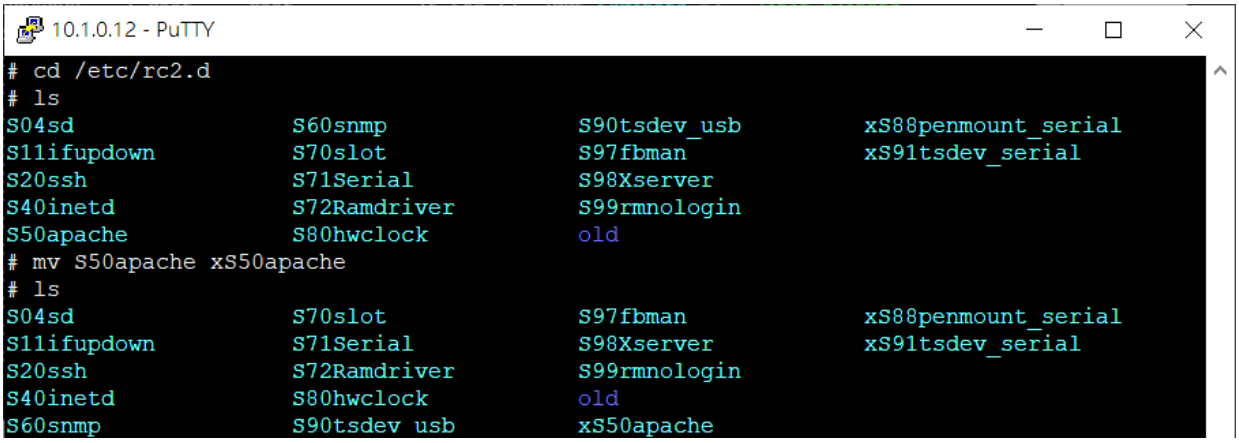


Figure 2

To re-enable the script, just undo the change.

Note: If you want to configure a new program to run at boot time, please refer to the following link for the chapter *<4.5.1 Configuring a program to run at boot time>*
http://www.icpdas.com/web/product/download/pac/linux/lp-8000/document/manual/lp-8x4x/lp-8x4x_user_manual_en.pdf

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❑ Ubuntu operating system - LP-8x2x for example

There are two parts for LP-8x2x series about programs which automatically start at boot time, we suggest user to check both of them to make your LinPAC perform better.

1. Ubuntu Upstart

Step 1: Use the '**ls**' command to check which service is enabling now, as illustrated in Figure 3.
Command: # ls /etc/init

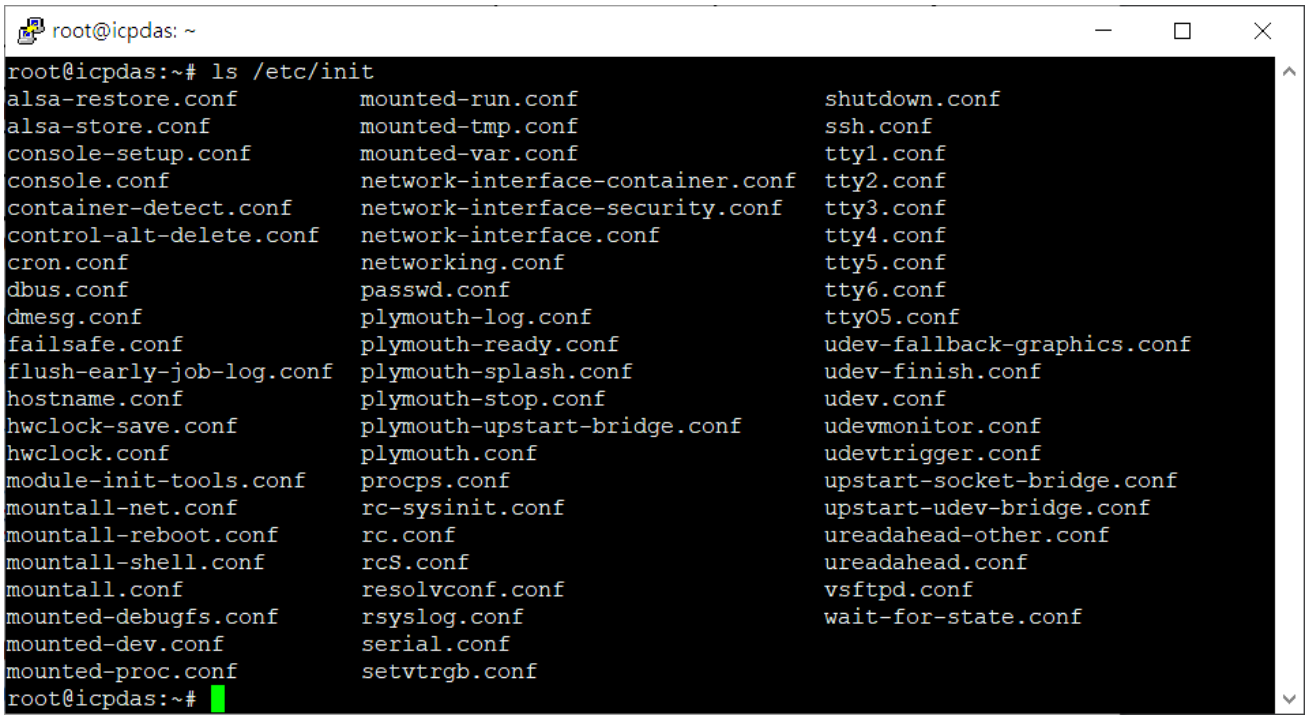


Figure 3

Step 2: Use the following command to prevent the program from automatically executing at boot time, we take tty4 as an example, as illustrated in Figure 4.
Command: # echo "manual" > /etc/init/tty4.override

Step 3: Reboot the LinPAC.

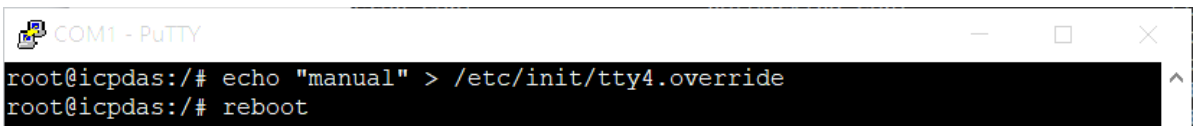


Figure 4

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Step 4: Using the following command to check the status of all job instances, as illustrated in Figure 5.

Command: # initctl --system list

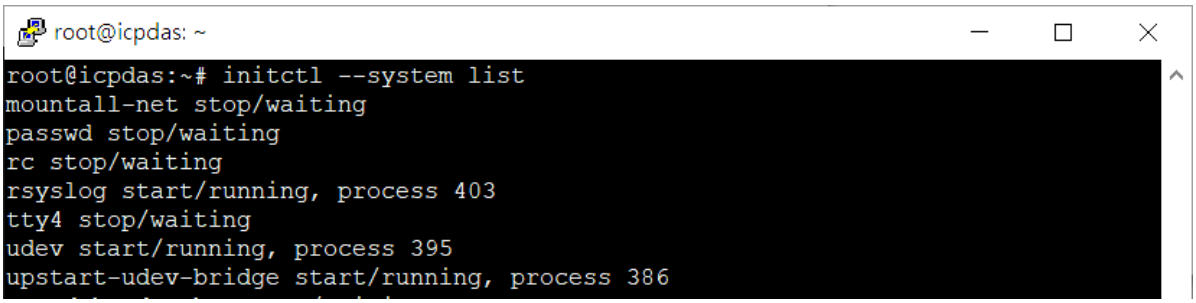


Figure 5

To revert to the original behavior, just delete the override file, as illustrated in Figure 6.

Command: # rm /etc/init/tty4.override

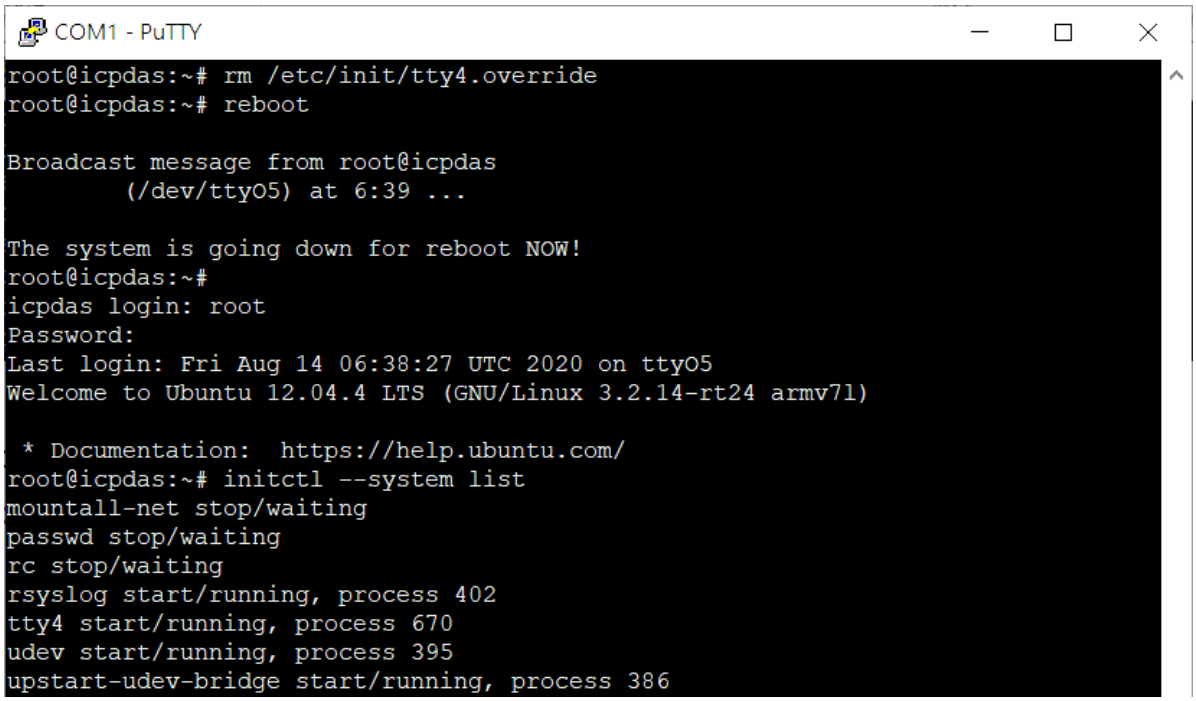


Figure 6

More information can be found at:
http://upstart.ubuntu.com/cookbook/#disabling-a-job-from-automatically-starting

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2. Linux System-V

Step 1: Use the '**ls**' command to check which service is enabling now, as illustrated in Figure 7.

Command: # ls /etc/rc<x>.d // <x> for run level

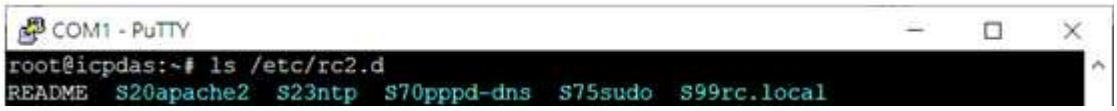


Figure 7

A "run level" is an operation mode that is used to determine which programs are executed during system startup. The default run level for the LP-8x2x is level 2.

Scripts in */etc/rc<x>.d/* are all symbolic links whose targets are located in */etc/init.d/* . The format of naming these links is *<S, xS or K> <2-digit-number> <original-name>*. The 2-digit-number determines the order in which the scripts are executed. The lower numbered file will executed earlier.

Scripts prefixed with an *S* will start on that run level. In contrast, those prefixed with either a *K* or an *x* will stop.

Step 2: Use the following command to remove System-V style init script links, we take apache2 as an example , as illustrated in Figure 8.

Command: # update-rc.d –f apache2 remove

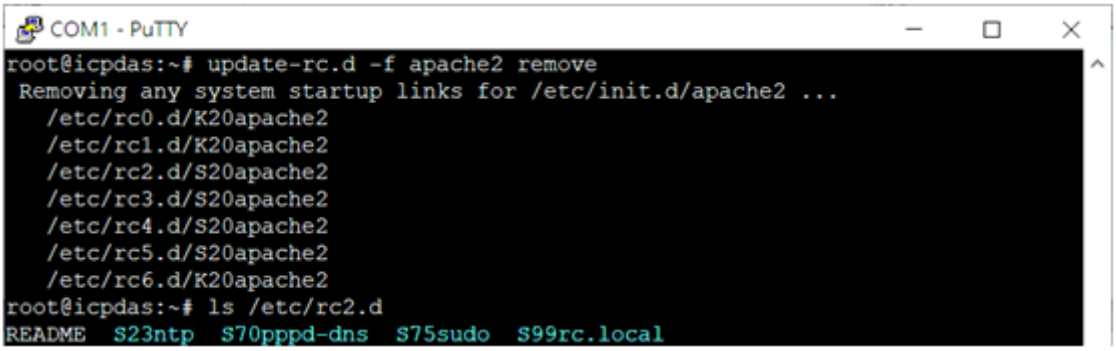


Figure 8

To re-install the service, just use the following command, as illustrated in Figure 9.

Command: update-rc.d apache2 defaults

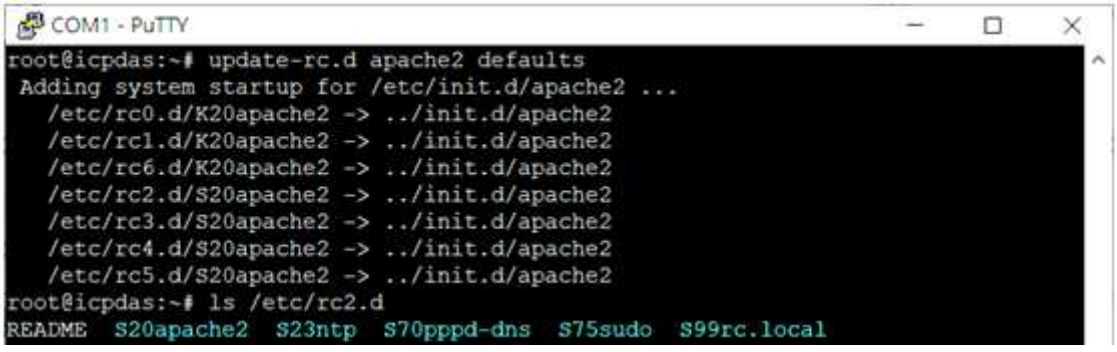


Figure 9

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