

# **BlueCat Linux 3.1 Release Notes**

Release 3.1

DOC-0419-02

Product names mentioned in *BlueCat Linux 3.1 Release Notes* are trademarks of their respective manufacturers and are used here only for identification purposes.

Copyright ©1987-2001, LynuxWorks, Inc. All rights reserved.  
U.S. Patents 5,469,571; 5,594,903

Printed in the United States of America.

All rights reserved. No part of *BlueCat Linux 3.1 Release Notes* may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photographic, magnetic, or otherwise, without the prior written permission of LynuxWorks, Inc.

LynuxWorks, Inc. makes no representations, express or implied, with respect to this documentation or the software it describes, including (with no limitation) any implied warranties of utility or fitness for any particular purpose; all such warranties are expressly disclaimed. Neither LynuxWorks, Inc., nor its distributors, nor its dealers shall be liable for any indirect, incidental, or consequential damages under any circumstances.

(The exclusion of implied warranties may not apply in all cases under some statutes, and thus the above exclusion may not apply. This warranty provides the purchaser with specific legal rights. There may be other purchaser rights which vary from state to state within the United States of America.)

---

# *Contents*

---

<b>CHAPTER 1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
	Distribution Packages .....	1
	Documentation .....	2
	World Wide Web .....	2
	Supported Cross Development Hosts .....	2
	New Features in BlueCat Linux 3.1 .....	3
	New Target Support Packages .....	3
	Technical Support .....	3
	World Wide Web .....	3
	LinuxWorks U.S. Headquarters .....	4
	LinuxWorks Europe .....	4
<b>CHAPTER 2</b>	<b>KNOWN PROBLEMS AND LIMITATIONS .....</b>	<b>5</b>
	Common Issues .....	5
	Target Board-Specific Issues .....	6
	EP7212 Target Board .....	6
	EP7312 Target Board .....	7
	SA-1110 Target Board .....	7
<b>CHAPTER 3</b>	<b>LATE-BREAKING NOTES .....</b>	<b>9</b>
	Last-Minute Installation Notes .....	9
	Installation on a Windows Host .....	9

---

<b>CHAPTER 4</b>	<b>DEFECT FIXES IN BLUECAT LINUX 3.1.....</b>	<b>11</b>
------------------	---	-----------

BlueCat Linux is a member of the LynuxWorks, Inc. family of embedded development and deployment solutions.

Combined with LynxOS, the leading Linux compatible real-time embedded operating system, BlueCat Linux offers a complete solution to embedded operating system requirements. For a complete overview of the LynuxWorks product family, please visit [www.lynuxworks.com](http://www.lynuxworks.com).

---

## Distribution Packages

BlueCat Linux distribution packages are available for multiple architecture platforms and target boards. The release of new or updated architecture support and Target Support Packages (TSPs) may or may not coincide with new releases of the BlueCat Linux core product. Specific architectures and TSPs may be supported by specific versions of BlueCat Linux.

In order to support LynuxWorks's ability to provide TSPs more frequently, the structure of the BlueCat Linux distribution CD-ROMs has been changed as follows:

- Binary Architecture CD-ROM: This CD-ROM contains the binary files for all supported boards for a specific microprocessor family (e.g., x86). Also contains the *BlueCat Linux User's Guide* as a PDF file.
- Target Support Package CD-ROM: This CD-ROM contains both the BlueCat Linux binary and source files to support a specific target board (e.g., EP7212). Also contains the *BlueCat Linux Target Support Guide* for the relevant target board.
- Source Architecture CD-ROM: This CD-ROM contains the source files required to rebuild the binaries.

---

## Documentation

The following BlueCat Linux documents are provided in PDF format on the BlueCat Linux Installation CD-ROMs, which are included in the BlueCat Linux package:

- *BlueCat Linux User's Guide* (hard copy also included in package)
- *BlueCat Linux Target Support Guide* for a specific target board

The *BlueCat Linux Release Notes* are not included on CD-ROM. Only this printed copy is included in the product package.

## World Wide Web

All BlueCat Linux documentation, including the *BlueCat Linux Release Notes* are available on the BlueCat Linux Web site:

<http://www.linuxworks.com/bluecat>

Release notes are continually updated with information about new developments and defect fixes.

---

## Supported Cross Development Hosts

The BlueCat Linux development environment requires an installed, functional cross development host with an Intel 386 or higher CPU. This host needs to be running one of the following development environments:

- TurboLinux Workstation, version 6.0
- Red Hat Linux, version 6.1 or higher
- Windows 2000/NT/98

## New Features in BlueCat Linux 3.1

BlueCat Linux 3.1 shares the same cross development functionality with BlueCat Linux 3.0. The major differences between the two releases are defect corrections in BlueCat Linux 3.1 and a new line of TSPs. Chapter 4 lists the defects corrected for this release.

New architectures and TSPs released henceforth are compatible with BlueCat Linux 3.1, unless otherwise stated.

### New Target Support Packages

- Cirrus Logic EP7212 (ARM)
- Cirrus Logic CS89712 (ARM)
- Cirrus Logic EP7312 (ARM)
- Intel SA-1110 (StrongARM)
- MIPS Malta
- Toshiba Pallas 3912 (MIPS)

---

## Technical Support

LynuxWorks Technical Support is available to answer questions about BlueCat Linux. Please feel free to contact us Monday—Friday (holidays excluded) between 8:00 AM and 5:00 PM Pacific Time (LynuxWorks U.S. Headquarters) or between 9:00 AM and 6:00 PM Central European Time (LynuxWorks Europe).

In addition, browse our World Wide Web home page for additional information about LynuxWorks products, Frequently Asked Questions (FAQs), and LynuxWorks news groups.

### World Wide Web

<http://www.lynuxworks.com>

## **LynuxWorks U.S. Headquarters**

Internet: [support@lynuxworks.com](mailto:support@lynuxworks.com)

Phone: (408) 979-3940

Fax: (408) 979-3945

## **LynuxWorks Europe**

Internet: [tech\\_europe@lynuxworks.com](mailto:tech_europe@lynuxworks.com)

Phone: (+33) 1 30 85 06 00

Fax: (+33) 1 30 85 06 06

This section provides an overview of problems and limitations of BlueCat Linux 3.1.

---

## Common Issues

- If `mkrootfs` is terminated (either by an error or by a signal), it tries to clean all its temporary files before exiting. However, due to certain features of the Cygwin execution environment, such temporary files can remain uncleaned in the `/tmp` directory on a Windows host. It is recommended that the `/tmp` directory be regularly checked and cleaned.
- The `tcclx` and `ddd` RPM packages are not included in the Windows-hosted distribution.
- The BlueCat Linux environment must be enabled before attempting uninstallation with the `uninstall` command, or else the uninstallation fails.
- On a RedHat 7.0 Linux host, when logged in as superuser, the `uninstall` script fails to remove the `demo.tsp_name` directory. Login as a regular user to avoid this problem. Note that using the `rm` command to remove the `demo.tsp_name` directory does not correct this problem. If `rm` is used to remove `demo.tsp_name`, the error message:

```
The TSP tsp_name is already installed
```

is issued when an attempt is made to reinstall the TSP with the `install tsp_name` command.

---

## Target Board-Specific Issues

### EP7212 Target Board

- For the clep7212 Target Support Package, the Ethernet MAC address should be passed to the kernel as a command line parameter. For example:

```
cs8900a_ether_addr=02:02:02:02:02:02
```

If the MAC is not set from the command line, it defaults to 00:e0:98:06:91:66.

- Thumb-enabled demos only work on CPUs that support the Thumb instruction set. The EP7212 board supports Thumb.
- To connect the EP7212 board with BlueCat Linux installed from Windows Terminal Emulator, the `Flow control` serial port should be set to `None`.
- While running a GDB test on WindowsNT, the user may get an error if the host IP address is used. To work around this error, use the host name instead.
- Only serial port `/dev/ttyS0` is supported. Serial port `/dev/ttyS1` is not supported.
- While running the `showcase` demo system, the user may not be able to access web pages with the Internet Explorer browser. In such a case, use the Netscape browser instead.
- On a Windows cross development host, the command `make menuconfig` generates the following error message:

```
>> Unable to find the Ncurses libraries.
>>
>> You must have Ncurses installed in order
>> to use 'make menuconfig'

make[1]: *** [ncurses] Error 1
make[1]: Leaving directory
'/clep7212-2/usr/src/linux.clep7212/scripts/lxdialog'
make: *** [menuconfig] Error 2
```

Use `make xconfig` to avoid this error.

- In the `gdb_thumb` demo, when remote debugging by way of serial cable with the `gdbserver` process running on serial

port com1 or com2, the clep7212 target board fails to establish connection with the `gdb` process running on the Linux host. The following connection error message appears on the host:

```
Ignoring packet error, continuing .....
Ignoring packet error, continuing .....
Ignoring packet error, continuing .....
Couldn't establish connection to remote target
Malformed response to offset query, timeout "
```

To work around this problem, use the TCP/IP network interface on the target board to establish connection between the `gdb` process on the host and the `gdbserver` process on the target board.

- When the kernel debug option is included under the kernel hacking configuration options, the build process produces errors relating to a missing file, `serial.h`. Also, if “`make xconfig`” is used to remove the kernel debug option, the serial line option is not removed. To work around this situation, manually edit the `.config` file to remove the kernel debug option.

## EP7312 Target Board

- For the clep7312 Target Support Package, the Ethernet MAC address should be passed to the kernel as a command line parameter. For example:

```
cs8900a_ether_addr=00:01:02:03:04:05
```

If the MAC is not set from the command line, it defaults to `01:02:03:04:05:06`.

## SA-1110 Target Board

- The SA-1110 port does not support hot swap on the compact flash interface. Support on the compact flash interface is limited to the compact flash ethernet card identified within the SA-1110 Target Support Guide (TSG).



---

## Last-Minute Installation Notes

### Installation on a Windows Host

Before installing BlueCat Linux on a Windows host, make sure that the `/etc`, `/bin`, and `/usr/bin` directories do not exist, and that there are no mount points to these directories in any existing Cygwin installation. This is to ensure that the files these directories contain are available to the user after mounting.

If disk space is exhausted during installation of BlueCat Linux on Windows NT hosts, the script displays `Permission denied` or a similar message.



*Defect Fixes in BlueCat Linux 3.1*

Table 4-1 shows defect fixes in this release of BlueCat Linux:

Table 4-1: Defect Fixes in BlueCat Linux 3.1

Platform	Subcomponent	ID	Summary
All	BlueCat Linux Misc	14737	Installation on TurboLinux host issues warnings
All	BlueCat Linux Messenger	14735	In the BlueCat Linux Messenger, resetting an I/O board using the <code>iopmanc -r</code> command produces the following message on the host console: Messenger: ignore node [x] failure Ignore this message
All	BlueCat Linux Messenger	14740	BlueCat Linux Messenger supports up to three non-system controllers (IOPs) only
All	BlueCat Linux Misc	14675	The <code>install demo</code> system supports only partitions 1-3 of the IDE disk
All	BlueCat Linux Misc	14676	No routing is available for the <code>multi_user_net demo</code> system
All	BlueCat Linux OS Loader	14739	The OS loader does not support installation from an NFS server
All	BlueCat Linux Misc	14732	There must be a dependency between <code>CONFIG_BLUECAT_MEMSIZE</code> and <code>CONFIG_PROC_FS</code>
All	BlueCat Linux mkimage	14733	<code>mkrootfs</code> does not support the <code>+s</code> permission
All	BlueCat Linux Misc	14882	The <code>tutorial demo</code> system of BlueCat:2.0FCS x86 does not compile under Turbolinux 6.0
All	BlueCat Linux Misc	14937	Incorrect screen output in the <code>tutorial demo</code> system

Table 4-1: Defect Fixes in BlueCat Linux 3.1 (Continued)

Platform	Subcomponent	ID	Summary
All	BlueCat Linux Misc	15297	Incorrect Makefile in <code>\$BLUECAT_PREFIX/demo/hello/src</code>
All	BlueCat Linux distribution CD-ROM	15471	For some CD-ROM letters, the installation script <code>cygwin.bat</code> fails to find the CD-ROM.
All	BlueCat Linux Misc	15477	The <code>info</code> utility does not work on the Windows development host
All	BlueCat Linux Misc	15479	<code>mkboot</code> always places <code>root=0</code> to the kernel command line
All	BlueCat Linux installation procedure	15508	The installation script on Windows does not warn of the lack of free disk space
All	BlueCat Linux Misc	15612	The Flash File System implementation of the <code>write()</code> call checks incorrectly for sufficient free space
All	BlueCat Linux Misc	15613	The maximum FFS data chunk size is too large
All	BlueCat Linux Misc	15632	<code>mkboot</code> fails to install BlueCat Linux onto a large-sized disk
All	BlueCat Linux Misc	15840	On a Windows host, <code>pftpd</code> hangs after interrupted booting
All	BlueCat Linux debuggers	15878	An extended-remote protocol bug in <code>gdbserver</code>