



# **bruAPP/OS™ 2.1.2**

## **Upgrade Instructions**

This document contains information on upgrading the bruAPP™ Backup Appliance v2.1.1 and prior to v2.1.2.



bruAPP™ Backup Appliance Upgrade Guide. Made in U.S.A.

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## **PRINTING HISTORY**

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The following instructions provide the complete steps to update the bruAPP/OS from version 2.1 and prior to version 2.1.1. The upgrade process requires the bruAPP USB Update Fob that was shipped with the bruAPP Backup Appliance. If, for any reason, you do not have the bruAPP USB Update Fob, please contact BRU Sales to request a replacement bruAPP USB Update Fob.

**\*\* IMPORTANT \*\***

As with all update/upgrade processes, we strongly urge you to perform a full backup of your bruAPP Backup Appliance to a tape device before proceeding with the upgrade. Performing the backup to the internal bruAPP RAID array is not the preferred method since there is a possibility, though highly unlikely, that the upgrade may fail or errors could result. If that occurs and the RAID array is in-fact reformatted, the data (including archives) cannot be recovered.

If you do not have a tape device or are interested in obtaining one, please contact BRU Sales to inquire about TOLIS Group Loaner Tape Units or to purchase a tape device from TOLIS Group that fits your needs and is compatible with your particular bruAPP model. To view a list of available tape devices from TOLIS Group that are compatible with the bruAPP, visit the bruAPP Upgrades and Add-ons page at: [www.tolisgroup.com/products/hardware/bruapp/models-pricing/upgrades.php](http://www.tolisgroup.com/products/hardware/bruapp/models-pricing/upgrades.php).



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# Instructions for Download of bruAPP/OS Upgrade

## USB Flash Drive Upgrade

Before you begin, please make sure that you have your bruAPP/OS USB Update Fob that was provided with your bruAPP Backup Appliance. If you do not have your bruAPP/OS USB Update Fob, please contact BRU Sales for information on obtaining a replacement.

1. Visit the bruAPP Backup Appliance download page at:  
<http://www.tolisgroup.com/docs/bruapp.php>
2. Click on the download link for the bruAPP/OS 2.1.2 upgrade. This file is approximately 207 MB in size. This download may take a while depending on your internet connection.



Safari Browser Users: Please turn off the “Open 'safe' files after downloading” option under the “General” panel in the Safari application Preferences.

3. Once downloaded, unzip the downloaded file. A folder named “bruAPP OS 2.1.2 Upgrade” should appear in the folder in which the zip file was extracted into.
4. Insert the bruAPP/OS USB Update Fob into your computers USB drive. Do not delete or remove any files at this time.
5. Inside of the “bruAPP OS 2.1.2 Upgrade” folder there are all of the files that you need to copy to your bruAPP/OS Update Fob. They are:
  - ldlinux.sys
  - rdimage.gz
  - splash
  - splash.lss
  - syslinux.cfg
  - update.lss
  - vmlinuz

Confirm that these files exist.

6. Copy and paste all of the listed files in step 5 onto the bruAPP/OS USB Update Fob. You will want to overwrite the existing files that exist on the bruAPP/OS USB Update Fob, so choose 'yes' if you are prompted by your OS to confirm the overwrite operation.

If there are any discrepancies on the files on the USB Fob, see the list below for the full list of the files that should exist on the USB drive:

- initrd
- ldlinux.sys
- memtest (optional — may be omitted in order to save space)
- rdimage
- splash
- splash.lss
- syslinux.cfg
- update.lss
- vmlinuz

7. Safely unmount/remove the USB drive from your system.

**Mac OS X:** Drag the bruAPP/OS USB Update Fob to the Trash to eject the bruAPP/OS USB Update Fob. After it has been ejected from the OS, it is safe to physically remove from your computer.

**Windows:** Right-click on the bruAPP/OS USB Update Fob under the My Computer section and

select "Eject" to safely eject the disk. After it has been ejected from the OS it is safe to physically remove from your computer.

**Linux:** Most Linux operating systems, such as Ubuntu, SuSE, OpenSUSE, Fedora, Redhat, and Debian permit the ability to use the same process as described for Windows.

At this point, you have successfully updated the bruAPP/OS USB Update Fob with the new bruAPP/OS update files. You may now move to the next section to update the bruAPP/OS.

If you have questions or concerns, please contact TOLIS Group Technical Support prior to performing any of the upgrade steps.

## **CD-ROM Upgrade**

For bruAPP users that have a CD-ROM drive in the bruAPP, download the upgrade ISO from the bruAPP Downloads page (<http://www.tolisgroup.com/downloads/hardware/bruapp/>). Once downloaded, burn the ISO image to a CD-ROM using your favorite ISO burning software.

It is important to note that dragging and dropping the ISO image to the CD-R is not going to allow the disc to be written correctly. You must use software that will convert the ISO to a proper disc image.

Suggested applications are:

**Mac OS X:** ISO images can be burned using Disk Utility.

**Windows:** Applications such as CDBurnerXP, Nero, and many others are well suited for the job.

**Linux:** Experienced Linux users can use 'dd' or GUI applications such as K3B.

For assistance in writing the ISO to a CD-ROM, please contact the manufacturer of the software in which you are using. TOLIS Group Support is unable to provide technical support for writing ISO images to CD-ROM.

# Instructions for bruAPP/OS Upgrade

**Please read all of these steps before actually performing them** on the bruAPP Backup Appliance. If you have any questions, please contact TOLIS Group Technical Support prior to performing the update/upgrade process.



*The steps below are for both USB and CD-ROM updates. CD-ROM users: replace “USB Update Fob” with “CD-ROM disc” where applicable as the steps to update from each type of media is the same.*

If you encounter errors or problems during the upgrade process, stop where the error occurs and contact TOLIS Group Technical Support to prevent any accidental data loss.

1. Before proceeding with the upgrade process, please perform a backup of your bruAPP Backup Appliance. If you are not sure how to do this, please contact TOLIS Group Technical Support.
2. Ensure that there are no backups running. The bruAPP Backup Appliance will need to be rebooted in order to perform the upgrade, thus terminating any currently running backups. If there are backups running, please allow them to finish.
3. Power off the bruAPP Backup Appliance.
4. Insert the bruAPP USB Update Fob into one of the bruAPP Backup Appliance USB ports. Most chassis have access to the USB ports from the front (must remove front bezel), however some chassis require the USB drive to be inserted into the rear of the unit.
5. Power on the bruAPP Backup Appliance.



By default, the BIOS for the bruAPP Backup Appliance is configured to automatically boot from the USB drive. When the boot splash image displays, if you do not see the black-and-white bruAPP/OS image, the bruAPP has not booted from the USB drive. Immediately remove the bruAPP USB Update Fob from the system to prevent damage to the USB drive. Once removed, contact TOLIS Group Technical Support for further assistance.

6. Once the bruAPP Update screen appears, your bruAPP Backup Appliance will be evaluated for upgrade. If the upgrade is possible, the system will report that it “looks OK to upgrade.” At this point, there will be an instruction to type a word, usually ‘go’ or ‘update’, which you need to type. It must be typed exactly as the prompt on the screen displays it to you or the system will just reboot instead of performing the update.



## **Warning**

Once the upgrade process starts it should not be stopped for any reason. Therefore, do not remove the bruAPP USB Update Fob, power off the system, or remove/disconnect any hardware from the bruAPP Backup Appliance. Doing so may cause unwanted data loss or even system corruption that requires the system to be returned to TOLIS Group for repair.

7. When the bruAPP/OS Update is complete, the system will prompt you to reboot. Press [ENTER] and remove the bruAPP/OS USB Update Fob from the system when prompted to do so.

The new bruAPP/OS will now boot.



**Existing Users of bruAPP/OS 2.1+: Your update is now complete. The steps that occur beyond this point are for users who have upgraded from bruAPP/OS 2.0 and prior.**

8. At this point there are two screens that will appear, the first screen will be the specification of the your local timezone and custom NTP server. Select your timezone from the list, then enter the

NTP server you would like to use. If you don't have an NTP server in-house, the bruAPP/OS will default to a public NTP server on the web. The bruAPP must have a working internet connection for the NTP process to synchronize the time between the bruAPP and the time server.

The second is the RAID Admin email address. There can be only one email address specified in this field for the 2.1 update and it should be the RAID Administrator for the bruAPP Backup Appliance. This person will be the one notified for bruAPP RAID events, such as failed devices, spare activation (if available) and other important RAID alerts.

If you would like to have multiple email addresses be used for notification, TOLIS Group suggests that you create a group account or alias that forwards the message to multiple email addresses. For example, you can setup an email address on your mail server, such as "bruapp-admins@mydomain.com", that forwards to John, Bob and Frank.

The acceptance of multiple email addresses is already planned for future bruAPP/OS versions.

The upgrade process of the bruAPP/OS is now complete. For users of the bruAPP Backup Appliance that have a slow or no internet connection, you may download the latest versions of the BRU Server Agent from the bruAPP Backup Appliance Web Server. To do this, use a web browser (such as Safari, Firefox, Internet Explorer, Google Chrome or Opera) and enter the IP address or Fully Qualified Domain Name (FQDN) in the address field.

If your bruAPP Backup Appliance has an IP address of 192.168.1.25, then the URL to enter into your web browser would be <http://192.168.1.25>. If the FQDN of your bruAPP Backup Appliance is "backupsys.mydomain.com" then the URL to enter into your web browser would be <http://backupsys.mydomain.com>.

The bruAPP web server also provides system alerts and notifications of problems. For example, if the bruAPP/OS boots and determines that a required member of the RAID Array is missing, the bruAPP web server will display the error and which drive is being reported as missing. Other alerts such as a RAID failure are also provided on the bruAPP web server.

# bruAPP/OS Change Log

The following is a history log of the changes made in bruAPP/OS 2.x. The date listed in each release is the date the updated version was made available to the general public. BETA testers and new bruAPP customers may have received the updated version prior to general release.

For questions or concerns about any of the bruAPP/OS changes, please contact TOLIS Group Support. To submit a feature request to TOLIS Group for the bruAPP/OS, please visit <http://support.tolisgroup.com/featurereq/>.

## Changed for bruAPP/OS 2.1.2

*October 29, 2010* – The majority of the changes from 2.1.1 to 2.1.2 provide further enhancements to the existing bruAPP/OS interface many of which are feature requests from bruAPP customers, and fix all reported bugs up to the time of the 2.1.2 release.

- **New** – Rebuild RAID – The bruAPP/OS now supports the ability for the customer to choose to completely rebuild the bruAPP RAID array from scratch, thus erasing all data on the RAID for a completely fresh rebuild. The RAID will be rebuilt to the same specifications as it was ordered.
- **New** – View License/Version Information – The bruAPP serial number, BRU Server version & build date, and bruAPP license details can now be viewed on the bruAPP. Customer Requested.
- **New** – Manual NTP Sync – Added the ability to manually request an NTP synchronization from the bruAPP, thus removing the requirement to reboot to obtain the same effect. Customer Requested.
- **New** – Support Contact Information – Added the ability to view the TOLIS Group Technical Support contact information directly on the bruAPP, thus removing the need to visit the TOLIS Group website.
- **New** – View Stage Status – Added the ability to view the bruAPP Stage Status (space used & available) directly from the bruAPP. Customer Requested.
- **New** – View NTP Log – Added the ability to view the bruAPP NTP log to troubleshoot NTP synchronization errors. Customer Requested.
- **New** – View Current System Time – Added the ability to view the current bruAPP system time. Customer Requested.
- **New** – Test Network Settings – Added the ability to test the currently set network settings for ping of an IP address (general network connectivity test) and of a hostname (for DNS resolution test). This assists in troubleshooting bruAPP network connection issues.
- **New** – Change ‘admin’ Password – Added the ability for the user to change the bruAPP and BRU Server ‘admin’ user password. Customer Requested.
- **Enhanced** – Web Alerts – Enhanced the web alerts that are displayed in the event a system requests a reboot, there’s a RAID alert, or other system notice.
- **Enhanced** – RAID Alert Emails – Enhanced the method used to send bruAPP RAID alert emails to the bruAPP RAID Administrator.
- **Enhanced** – User Screens – Enhanced the overall bruAPP/OS menu system to easier to navigate functions and operations.
- **Enhanced** – NTP Update – Enhanced the bruAPP/OS NTP daemon for alerting when NTP synchronization requests fail.
- **Fixed** – bruAPP/OS Internet Access – Fixed a bug that would cause the bruAPP/OS Update Check to fail when performed due to a lack of internet access from the bruAPP when using static IP addresses instead of DHCP.
- **Fixed** – Update Check – Fixed a bug that would incorrectly report no internet access when performing an update check.
- **Fixed** – DHCP to Manual NIC – Fixed a bug that would disable a NIC when switching from DHCP to manual. Going through all of the settings again, without changing anything, would re-enable the NIC.
- **Fixed** – Manually Set Date/Time – Fixed a bug that could prevent users from manually setting the date and time on the bruAPP if NTP is not used.

- Numerous other small enhancements.

## Changes for bruAPP/OS 2.1.1

*April 20, 2010* – Most of the changes for 2.1.1 are to resolve reported bugs on the bruAPP/OS 2.1. bruAPP/OS 2.1.1 also includes two new features.

- **New** – User Defined NTP Server – bruAPP users that have an in-house NTP server may now specify the in-house server if the bruAPP doesn't have a valid external network connection.
- **New** – Update Check – The bruAPP/OS now checks for updates when the “Update Check” option has been selected from the bruAPP's Configuration menu.
- **Enhancement** – NTP Process – The bruAPP/OS NTP process has been enhanced for users for better reliability and accuracy of the system time.
- **Enhancement** – System Menu's – The bruAPP/OS Main Menu has been broken out into sub-menus for easier navigation of the bruAPP/OS menu options.
- **Fixed** – An error that could occur during the setup of the secondary NIC (eth1) for bruAPP users that utilize both network interface ports.

## Changes for bruAPP/OS 2.1

*April 7, 2010* – There are several significant changes in bruAPP/OS 2.1 that provide better reliability and peace of mind from your bruAPP Backup Appliance.

- **New** – RAID Administrator – Provides the user with the ability to specify an email address to notify in the event of a RAID status change.
- **New** – Timezone Settings – Allows the user to specify the timezone for the system.
- **New** – NTP Process – The Network Time Protocol enables a bruAPP that is connected to the internet access to update the system and hardware time to ensure that all schedules run as expected and the system time to remain correct.
- **New** – bruAPP web server Status Alerts. This notifies users of system alerts such as warning and critical errors through the bruAPP web page. Enter the IP address or hostname of the bruAPP system into your web browser for information.
- **Fixed** – A possible problem when expanding the bruAPP stage array for customers who have added disks to expand their bruAPP RAID.
- **Fixed** – A problem with emails sent from BRU Server having a time stamp that is set to UTC instead of the system time.
- **Fixed** – Attaching to a job in the bruAPP Console (ALT-F2) could cause the Text Console to crash.
- **Fixed** – A 'command not found' error caused when the BRU Server Graphical Console tried to obtain information when using the Stage Status feature under Tools -> Server Commands.
- **Enhancement** – improved RAID monitoring process provides enhanced monitoring of the RAID array. Added notification via email and the bruAPP web interface of any RAID status issues.
- **Enhancement** – The bruAPP Backup Appliance no longer “halts” when a disk is found to be missing from the bruAPP RAID array if a tape device is connected. This enables customers who have encountered a RAID failure to continue to perform D2T backups until the RAID is back online.

## Changes for bruAPP/OS 2.0

*January 26, 2010* – A few enhancements have been made to the bruAPP/OS version 2.0 as well as providing the latest available version of BRU Server.

- **Updated** – bruAPP/OS from 1.x to 2.0
- **New** – BRU Server 2.0.2 – Latest available version at time of release.
- **Updated** – Web server downloads for BRU Server version 2.0
- **Updated** – SCSI/SAS/Fibre-Channel modules
- **New** – System Memory Testing Utility
- **New** – MX Record/Email lookup utility for debugging email problems

- Numerous other small bug fixes

# Contact Information

## **BRU Sales**

Hours: Monday – Friday 8AM – 5PM MST (GMT -0700)

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Technical support is only available to customers with current Technical Support Agreements. If you do not have a current Technical Support Agreement, please contact BRU Sales for information on obtaining or renewing your Technical Support Agreement.