

## Hewlett-Packard Ignite-UX (IGNITE) Release Notes

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## 1. Announcements

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Ignite-UX is a product supplied with HP-UX to perform initial configuration and software installation of HP-UX systems.

The English version of this document posted to the Web may contain more current information than the version included in the product. For the most current information, go to:

<http://www.docs.hp.com/en/IUX/infolib.html>

This version of Ignite-UX is able to install the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
---------------	-----------------	----------------------

B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

For a full description of the differences between the "A", "B" and "C" versions of this product, see Section 1.1, Release Numbering Scheme.

Ignite-UX is available via Hewlett-Packard's software Web site at:

<http://www.software.hp.com/>

Ignite-UX's product Web page is available at:

<http://www.docs.hp.com/en/IUX/>

This site is kept up to date with the latest version of Ignite-UX, along with articles and other documentation of interest. Check this site for new versions, FAQs, and other information about Ignite-UX.

There are a few HP-UX patches that should be installed for proper operation of Ignite-UX. See Section 5.1, Required Patches.

### 1.1 Release Numbering Scheme

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The Ignite-UX code base is common for much of the content of these

releases so the features are similar. One of the important differences between Ignite-UX releases is the set of HP-UX releases supported.

The format is:

{A|B|C}.major-rev.minor-rev.ticker

{A|B|C} => Major version identifier; rarely changes except when a major Ignite-UX design change occurs.

=> A and B versions of Ignite-UX are no longer supported.

=> C: supports HP-UX B.11.11, B.11.23 and B.11.31 Ignite-UX servers installing HP-UX B.11.11, B.11.23 and B.11.31 targets. HP-UX 11.31 server and target support is not available prior to the C.7.0 version of Ignite-UX.

major-rev => Major software release number; rarely changes except when a major change occurs (for example, adding support for a new operating system)

minor-rev => Changes at each release

ticker => Changes each time we rebuild the product

## 1.2 Supported Versions of Ignite-UX

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It is important to periodically review the support status of the Ignite-UX versions you are using to avoid use beyond End of Support (EOS). These release notes include information about previous Ignite-UX versions. Some of this information may include details about Ignite-UX versions no longer supported. The current support status of Ignite-UX versions is available at the following location:

[http://www.docs.hp.com/en/IUX/docs/Supported\\_Versions.pdf](http://www.docs.hp.com/en/IUX/docs/Supported_Versions.pdf)

## 1.3 Minimum Memory Size

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During installation and recovery, Ignite-UX uses system memory to hold a RAM-based installation environment with a subset of HP-UX. Ignite-UX requires installation and recovery client systems to have at least a minimum amount of RAM to hold this installation environment while leaving enough space to run HP-UX. The minimum required RAM size is specific to the HP-UX version to be installed or recovered. The required minimum memory for this release of Ignite-UX is:

Client OS	IMM*	HP 9000	HP Integrity
11.11	128 MB	256 MB	N/A
11.23	N/A	1.0 GB+	1.0 GB+
11.31	N/A	1.5 GB	1.5 GB

\* The IMM size is the size of the initial memory module on HP 9000 (PA-RISC) systems. The first memory module must be large enough to

hold the install kernel and install file system.

- + The Minimum Ignite-UX memory size specified is larger than the original HP-UX release memory requirement. OS content and install environment changes since initial release requires more memory. Install or recovery of a system with less memory may take much more time than expected or may hang.

#### 1.4 Disk Space Requirements

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- Ignite-UX servers must have at least 700 MB of free disk space available in /opt/ignite to install support for all HP-UX releases (B.11.11, B.11.23 and B.11.31).  
[This information is current as of C.7.2.]

To save space, you can install support for only those HP-UX releases you plan to install or recover.

- Ignite-UX servers may require significant space in /var/opt/ignite to support clients systems, store software depots and save archives.
- Installation of Ignite-UX can be done while the system is up. It does not require a system reboot.

#### 1.5 Support for Non-HP Tools

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- HP provides CD and DVD writing tools with Ignite-UX at no cost under the terms of the GNU General Public License (GPL), <http://www.gnu.org/copyleft/gpl.html>. The source code is delivered along with these tools. The tools have been tested to confirm basic functionality needed to create media for Ignite-UX as described in product documentation. Not all features or capabilities of these CD and DVD writing tools have been verified to be functional on HP-UX. HP provides support for the CD and DVD writing tools supplied with Ignite-UX when they are used as described in Ignite-UX documentation. To provide feedback or report a defect for Ignite-UX use, please open a call with the IT Resource Center. Support for other use is available through informal means such as the open source community or online forums.

- These tools do not function on B.11.11 32-bit systems.

#### 1.6 Important Support Changes and Plans

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- Ignite-UX dropped support for B.11.00 with the C.7.3, September 2007, release.
- Ignite-UX added support for B.11.31 with the C.7.0, February 2007, release.
- Ignite-UX dropped support for B.11.22 with the C.6.5, December 2005, release.
- The make\_recovery command is no longer delivered as of Version C.6.0;

it has been replaced by make\_tape\_recovery and make\_net\_recovery.

## 1.7 Ignite-UX Change Request Information Change

- =====
- Starting with the C.7.4.157 version of Ignite-UX, release notes and other information will refer to product Change Requests (CRs) using a new identifier format. The new CR information repository does include information to correlate migrated CR identifiers (such as JAGag12345) if needed.

## 2. Ignite-UX Releases

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This section describes supported Ignite-UX releases. Major changes and defect fixes for each release are described here.

### 2.1 Version C.7.7.98 (9/2008 - Web Release Only)

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The C.7.7.98 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
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B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

Ignite-UX version C.7.7.98 contains the following new features:

- Fixes for the following Change Requests:

- \* QXCR1000834777. A rare data corruption problem has been fixed.

- \* QXCR1000836657. Restored USB 2.0 driver to 11iv3 IPF install kernel. This fixes a regression introduced in the C.7.7.93 version of Ignite-UX.

- Notes related to known problems with this release:

There are no new known problems.

### 2.2 Version C.7.7.93 (9/2008)

=====

The C.7.7.93 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

- Announcement of deprecated features:

- \* The config file keywords related to graphics devices have been returning incorrect values since the C.7.0 release. These attributes will be removed from `instl_adm(4)` in a future release. The attribute keywords being deprecated are:

```
graphics[].model
graphics[].id
graphics[].planes
graphics[].resolution_x
graphics[].resolution_y
```

Ignite-UX version C.7.7.93 contains the following new features:

- The following manual entries are updated or improved in this release:

- \* `make_depots(1M)`
- \* `make_net_recovery(1M)` and `make_tape_recovery(1M)`
- \* `manage_index(1M)`
- \* `instl_adm(4)`

- A new option (-u) was added to `make_net_recovery` and `make_tape_recovery` that causes it to automatically update the Ignite-UX software on the system from the Ignite-UX server when needed.

- Fixes for the following Change Requests:

- \* QXCR1000471989. The `list_expander` command now reports the correct device file on B.11.31 VxVM 5.0 systems.
- \* QXCR1000575839. Conditional config file statements based on `lan[]` used in the `*INSTALLFS` now behave as expected when a non-default lan device is selected from the user interface. The conditional statements are now re-evaluated to pickup the changes based on the lan device selected. This allows the `_hp_lanadmin_args` example shown in `instl_adm(4)` to work when picking non-default lan devices.
- \* QXCR1000588459. Expert recovery for B.11.11 and B.11.23 VxVM clients is now functional.
- \* QXCR1000589444. Recovering a VxVM system will now correctly create the `/stand/bootconf` file.
- \* QXCR1000589549. The `make_tape_recovery` command can now handle a greater number of device files inside an LVM volume group.

- \* QXCR1000592539. The ansitape command has been fixed so that it recognizes details of Ignite-UX recovery tape files. As a result the ansitape -x option may be used to read Integrity tape ARCHIVE files.
- \* QXCR1000593741. The "Replace the kernel on the root file system" option has been removed from expert recovery.
- \* QXCR1000593799. The itool user interface will no longer give a warning when the VxVM root disk group is changed from "rootdg" to something else if using VxVM 4.1 or later.
- \* QXCR1000593920. Several problems with long hostnames have been resolved. There is a new sanity check to limit hostname length as appropriate for each HP-UX release.
- \* QXCR1000714451. Ignite-UX will now allow the user to override the default behavior of passing the persistent device special file to setboot by setting the `_hp_force_setboot_path` variable to "true" on B.11.31. See `instl_adm(4)` for more information.
- \* QXCR1000714872. The bootsys command has been enhanced so that it does not terminate when client systems do not respond to ping requests.
- \* QXCR1000717081. B.11.31 IPF USB recoveries will no longer get a bogus warning message regarding being unable to remove `/dev/deviceFileSystem`.
- \* QXCR1000741225. The itool user interface will now catch the case where the hostname and/or IP address are not set when "Go!" is pressed even if the "System" tab was never visited.
- \* QXCR1000750072. Ignite-UX code has been fixed so that commands will run successfully on long hostname/nodename systems without any workarounds in place.
- \* QXCR1000751131. Kernel changes made in `post_config_cmd` or `post_config_script` hooks via `kctune` will be preserved in the final kernel.
- \* QXCR1000757963. Fixed truncated message that happened at bootup: `** Number of SAS devices swapped to be in physical`.
- \* QXCR1000761661. The `make_ipf_tape` command will now detect a failure in the tar command used within, and will issue a diagnostic message instead of ignoring it.
- \* QXCR1000763417. Improved the warning message given when setting `_hp_locale="C"` but not selecting the 11.31 HPUXLocales bundle.
- \* QXCR1000766335. Correctly preserve the `/stand/vmunix` hard links when recovering a system. Some configurations (certain releases using whole-disk) would panic at boot when `/stand/vmunix` was not a hard-link.
- \* QXCR1000767949. The ignite GUI will now display the boot device

for a new client as a note as opposed to an error message when you add a new client.

- \* QXCR1000775478. All copies of the kernel in /stand are now processed so that they are not left to be sparse files when recovering a system.. Sparse kernels are not bootable on IPF systems.
- \* QXCR1000775602. Bundles that exclude themselves from swinstall will now be handled correctly at swconfig time.
- \* QXCR1000777870. The handling of quote characters in attributes used for I/O agility has been improved.
- \* QXCR1000783124. The save\_config command will now correctly handle cases when it is unable to determine the type of a filesystem via fstyp.
- \* QXCR1000783706. No longer produce a WARNING message regarding disks with path "/dev/dsk/-" during make\_net\_recovery and make\_tape\_recovery when the system has a VxVM disk group with missing disks.
- \* QXCR1000784366. Ignite-UX will now properly handle versions of the io.info file other than 2.1 being present in the clients directory of the server.
- \* QXCR1000785485. On IPF systems, Ignite-UX will now restore autoboot settings in place prior to system installation and they will be in effect after the install is complete.
- \* QXCR1000787670. The make\_depots command now by default correctly copies the contents of an 11.31 DVD #2 into the "core" depot instead of the incorrect "apps" depot.
- \* QXCR1000790097. The make\_sys\_image command now correctly handles the error which occurs when archives greater than 2GB are encountered on NFS version 2. The following error will now result in the script exiting with an appropriate return value:  
  
ERROR: Archive files larger than 2GB are not supported on NFS version 2. The approximate size of the archive ("size" kbytes) is at or beyond this limit.
- \* QXCR1000790469. When operating over a LAN interface that had IPv6 enabled, bootsys could sometimes incorrectly obtain IPv6 IP addresses even though it only operates in IPv4 mode.
- \* QXCR1000791440. The issue where make\_net\_recovery creates the CINDEX file locally on the client instead of on the server when executed with the resume (-r) and lla (-l) options has been resolved.
- \* QXCR1000793373. Fixed the config file parser so that use of the disk[x].dev\_spec keyword no longer causes errors when running "instl\_adm -T"



- \* QXCR1000794939. The NOTE regarding bad block relocation never being allowed for dump volumes will not be seen in VxVM recoveries. VxVM has no concept of bad block relocation.
- \* QXCR1000797434. Systems that have VxVM volumes that contain a backslash (\) character will now have those volumes considered mounted and restored correctly by save\_config, make\_net\_recovery and make\_tape\_recovery.
- \* QXCR1000797486. The I/O listener (smapi\_listener) process no longer aborts in the case where a partitioned disk had some device files missing on the system.
- \* QXCR1000797957. Modifying filesystem information of a VxVM system during recovery now correctly preserves the KB unit suffix for the public\_size keyword in the config file. Without this, some disk space would be unallocated for the VxVM disks.
- \* QXCR1000798960. The config file hw\_instance\_num keyword now works correctly when installing from a depot on an Itanium system.
- \* QXCR1000797962. Improved handling of newer USB drives and firmware to avoid Q\_BOOT errors when booting from CD or DVD media.
- \* QXCR1000800024. The make\_sys\_image command will no longer have a syntax error when the -u option is used under certain circumstances.
- \* QXCR1000813691. The save\_config command will now correctly write informational and warning messages to stderr, avoiding unparseable resulting configuration files when called like:  
`save\_config -f - > cfgfile`.
- \* QXCR1000814265. Performance of I/O inventory at the beginning of install session and when running rescan\_hw\_host or related commands has been improved. These improvements are most significant on large I/O configurations or when disk device special files are missing.

### 2.3 Version C.7.6.100 (6/2008 - Web Release Only)

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The C.7.6.100 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

- Fixes for the following Change Requests:

\* QXCR1000781810. Fixes a problem where UNCLAIMED devices could cause the I/O listener to core dump, which would result in failures of save\_config, rescan\_hw\_host, add\_new\_client and installs.

- Notes related to known problems with this release:

There are no new known problems.

## 2.4 Version C.7.6.98 (6/2008)

=====

The C.7.6.98 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

Ignite-UX version C.7.6.98 contains the following new feature:

- The only changes in this release compared to the C.7.5 version are the B.11.23 IINSTALL and WINSTALL install kernels and this document. The RAID-01 and SerialSCSI-00 (applies only to IINSTALL) drivers were updated to their most recent versions in the kernels in order to support new RAID and SAS controllers respectively.

- Notes related to known problems with this release:

There are no new known problems.

## 2.5 Version C.7.5 (3/2008)

=====

The C.7.5 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

- Pre-announcement of user interface changes:

\* In a future release of Ignite-UX, the "Guided"/"Wizard" user interface mode will be removed. Only the "Advanced" mode will

then be available.

Ignite-UX version C.7.5 contains the following new features:

- To better support I/O agility, Ignite-UX has made enhancements to the way that disks can be identified using the config file syntax as described in `instl_adm(4)`. Disks can now be identified by one or more of the attributes:
  - Hardware path (`HW_PATH`)
  - World wide ID (`WWID`)
  - Physical Location (`PHYS_LOC`)
  - Device ID (`DEVICE_ID`)

`make_net_recovery`, `make_tape_recovery`, `save_config`, and the `itool` user interface now produce config files that specify combinations of these attributes as appropriate for the disk I/O protocol and HP-UX release. This allows devices (especially SAS disks) to be relocated, replaced or additional devices added, and still be correctly selected during a recovery, an automated install or an install using previous settings.

This functional change resolves many of the issues described in the "Ignite-UX and SAS Devices" white paper at:

<http://www.docs.hp.com/en/5992-1948/5992-1948.pdf>

This functionality does not address the issue of device file names being changed during a recovery in the case that devices have been relocated, replaced or added. Because of this issue, data volumes may fail to be re-imported during a recovery. See the document mentioned above for more details.

If you have existing config files that automatically select SAS disk devices during install, you should consider changing them to use a Physical Location (`PHYS_LOC`) value rather than a HW Path value to ensure the correct device is used.

- The default user interface mode used on client consoles has been changed from "Guided"/"Wizard" mode to "Advanced" mode. The default mode may be controlled by the config file keyword "use\_expert\_ui" (see `instl_adm(4)`).
- Ignite-UX `print_manifest` information has been enhanced to include processor speed information under the System Hardware section
- The time required for I/O inventory has been reduced. I/O inventory is done when the Ignite-UX install environment starts up on a client system. This reduction in time is most noticeable on very large I/O configurations consisting of hundreds to thousands of disks.
- The time needed to build new kernels during cold-installs on certain systems with less than approximately 4GB of RAM has been reduced. In some cases, kernel builds that took several hours to complete will now finish in a few minutes. Additionally, software load times on these systems may decrease by about 10%.
- By default a client config file has precedence over config content in

an INSTALLFS file. In some situations it can be advantageous to always ignore client-specific config settings from prior installs. The config variable `_hp_ignore_prior_config` has been added to specify that any per-client config file should be ignored.

- The following manual entries are updated or improved in this release:

- \* `make_net_recovery(1M)` and `make_tape_recovery(1M)`
- \* `save_config(1M)`
- \* `instl_adm(4)`

- Fixes for the following Change Requests:

- \* QXCR1000472009. The `make_net_recovery`, `make_tape_recovery` and `save_config` commands have been changed to correctly handle VxVM disk groups that contain no volumes.
- \* QXCR1000473433. LVM physical extent size for non-root disks is no longer fixed at the default of 4. The physical extent size now starts at the default of 4, and will increase if required until one extent can accommodate the entire Volume Group Reserved Area (VGRA).
- \* QXCR1000473457. The `max_physical_extents` LVM parameter is automatically decreased if it was initially set larger than an acceptable value to fit in the Volume Group Reserved Area (VGRA). Prior to this change, Ignite-UX would only increase the physical extent size to try to make things fit within the VGRA. This resulted in the extent size increasing each time a change in the UI was made without solving the problem.
- \* QXCR1000557998. Fixes an issue with the `print_manifest` command when run with the shell `COLUMNS` variable set to unusual values. This fix is needed if `print_manifest` reports a `diskinfo` error message.
- \* QXCR1000559217. When multiple paths to a disk/LUN are specified to be part of a volume group, the disk space for that disk/LUN is now only counted once. This prevents the user from over-allocating the disk space, which was possible in previous releases.
- \* QXCR1000587806. It is now possible to install an image from 11.31 IPF custom-built DVD media. This issue was referenced as a known problem in C.7.3 as JAGag42952.
- \* QXCR1000589214. Issues around Ignite-UX creating swap volumes with usage "fsgen" in VxVM configurations have been resolved. Swap volumes are now created with usage "swap".
- \* QXCR1000590752. Avoids error message when `/dev/deviceFileSystem` is mounted and is in `/etc/mnttab` when `list_expander` is run.
- \* QXCR1000590999. The verbose SAS reordering messages are no longer reported when a client system boots and scans for I/O devices.
- \* QXCR1000593413. Corrected minor VxVM volume size calculation

errors related to 8KB versus 1KB volume alignment.

- \* QXCR1000714063. The save\_config command will now account for the lost disk space consumed by idisk on 11.31 IPF installs, such that the \_hp\_efi\_partition\_size is not fully realized. Thus repetitive recoveries do not end up with the EFI partition size shrinking through each iteration of the cycle. It will remain as stated (for example the default 500MB).
- \* QXCR1000739856. The save\_config command no longer has awk errors when certain device files were left behind.
- \* QXCR1000741905. Fixes issue when if multiple Ignite-UX product associated bundles such as Ignite-UX-11-31 and Ignite-UX-11-23 are installed the 8KB INSTALLFS config area may not be initialized as expected. When this config area is not initialized it can result in bootsys and instl\_adm errors due to invalid config content such as xarg errors.
- \* QXCR1000742976. When an Ignite-UX server uses a very large file system to store client recovery content for make\_net\_recovery, failures may occur due to calculating available file system space. The make\_sys\_image command has been fixed to handle large Ignite-UX server file systems.
- \* QXCR1000746998. Data disks configured as VxVM and whole-disk that are to be imported after a recovery are now correctly hidden from the user (to prevent accidentally overwriting them). Prior to this release, only LVM disks to be imported were hidden. make\_net\_recovery and make\_tape\_recovery now list those disks in the \_hp\_hide\_other\_disks variable.
- \* QXCR1000750282. The make\_media\_install example program incorrectly checked for patches related to large file support that are not needed for HP-UX 11.31.
- \* QXCR1000753436. The default swap size for 30GB to 60GB root disks has been changed from 4GB to 2GB for 11.31. This smaller default size is more appropriate for these smaller disks and is consistent with 11.23.
- \* QXCR1000755571. The itool user interface now correctly hides disks that are specified by \_hp\_hide\_other\_disks or hide\_boot\_disk. Ignite-UX version C.7.4 did not hide these disks which would allow the user to pick disks during a recovery that had disk groups to be imported. This would generate an error during the final checks. (See also QXCR1000746998 below).

- Notes related to known problems with this release:

- \* QXCR1000760157. An install of a HP Virtual Machines VM\_Guest will fail when all these conditions exist:

- 1) HPVM using version 3.5 with PHSS\_37306 and PHSS\_37312
- 2) VM\_Host with HP-UX B.11.23 0712 with VxVM disk layout (either 4.1 or 5.0)
- 3) VM\_Host defines lv backing store for VM\_Guest as VxVM

4) VM\_Guest is installed with B.11.31 with a VxVM disk layout

A workaround for this problem is to change any of these specific conditions. For example, change the backing store to LVM or to a whole disk. Or change the VM\_Guest disk layout to LVM.

## 2.6 Version C.7.4.157 (12/2007 - Web Release Only)

=====

The C.7.4.157 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

Ignite-UX version C.7.4.157 contains this single functional change from the C.7.4.155 version:

- The B.11.23 and B.11.31 IINSTALL install kernel sasd (SAS) device driver was changed to not download host bus adapter (HBA) firmware. This functional change makes SAS HBA firmware management simpler since booting the Ignite-UX install kernel will no longer result in possible firmware update or downdate.

- Fixes for the following Change Request:

\* QXCR1000745232. This fix helps avoid an HP-UX system panic that may happen on systems with SAS adapters during system boot in the middle of install before software configuration. Note that the install of an older HP-UX release on a system that has newer SAS adapter firmware may trigger a panic even with this fix. Although the new install kernel does not update or downdate the firmware version, the final system kernel (/stand/vmunix) may downdate the firmware version due to the installed sasd driver. This could happen if the system has had a newer HP-UX release installed. If the system panic does occur, software configuration and the rest of the install process should complete normally after the extra reboot. The SAS driver CR QXCR1000472961 provides information about this general issue not related to install.

- Notes related to known problems with this release:

There are no new known problems.

## 2.7 Version C.7.4.155 (12/2007)

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The C.7.4.155 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

- Pre-announcement of user interface changes:

\* In a future Ignite-UX release the default user interface mode used on client consoles will be changed from "Guided"/"Wizard" mode to "Advanced" mode. The default mode may be controlled by the config file keyword "use\_expert\_ui" (see `instl_adm(4)`).

\* In a later release of Ignite-UX the "Guided"/"Wizard" user interface mode will be completely removed.

Ignite-UX version C.7.4.155 contains the following new features:

- This release includes significant changes in the Ignite-UX user interface screens used for root disk selection and for file system configuration. A disk list filter capability has been added to simplify finding the correct disk. Filtering by adapter, protocol and other criteria is supported. A disk search capability has also been added to simplify finding the correct disk in very large configurations. See the Ignite-UX Administration Guide for more details regarding these UI changes and for example screen shots.
- This release includes enhancements to Ignite-UX to be more aware of multiple path I/O configurations for HP-UX 11.23 and 11.11. When installing or recovering 11.11 and 11.23 Ignite-UX will now automatically configure all paths to selected disks as links in an LVM volume group. A config file only has to specify one path for each disk. Ignite-UX will detect the other paths and configure them as alternate links. The selected path will become the primary link. This behavior is similar to what is already done for 11.31 and VxVM.
- This release integrates USB 2.0 drivers into the B.11.23 install environment. This device driver significantly reduces the time required for B.11.23 DVD media install. This driver also corrects issues with determining the boot path for vMedia DVD devices so that boot device rescan is no longer required. Note that iLo vMedia functionality simulates a USB 1.1 DVD device. As a result, no vMedia performance improvement should be expected (performance of vMedia is typically limited by the network connection).
- In this release of Ignite-UX all support for running `mediainit` has been completely removed. This capability is no longer needed. Disk devices do not require low-level formatting.
- The following manual entries are updated or improved in this release:

- \* bootsys(1M)
- \* instl\_adm(1M)
- \* instl\_dbg(1M)
- \* make\_sys\_image(1M)
- \* manage\_index(1M)
- \* instl\_adm(4)

- Fixes for the following Change Requests:

- \* JAGaf22673 fix. Installs will no longer see pvcreate failures similar to this:

```
pvcreate: Couldn't open physical volume "/dev/rdisk/c5t1d1s2": I/O error
ERROR: Command "/sbin/pvcreate -f -B /dev/rdisk/c5t1d1s2" failed.
```

Note that under certain circumstances it may be required to manually remove the alternate links if your storage configuration does not support LVM PV links. For more information see:  
[http://www.hp.com/products1/serverconnectivity/mass\\_storage\\_devices.html](http://www.hp.com/products1/serverconnectivity/mass_storage_devices.html)

- \* JAGag05113 fix. Ignite-UX will now clear out dump volumes like it has done swap areas so that file system remnants will not remain.
- \* JAGag29139 fix. Sanity checking done prior to install now includes minimum memory size checking. Previously memory size checking was only done during boot and messages were reported to the console.
- \* JAGag35033 fix. For VxVM installs of 11.11 and 11.23 on multi-pathed disks, Ignite-UX will now handle the case where non-DMP disk paths are selected.
- \* JAGag41500 fix. Anytime bootsys gives an error indicating that the user should "Use the -f option" the ignite GUI will offer the user to re-try bootsys with the -f option.
- \* JAGag41900 fix. Ignite-UX has been changed to correctly determine the maximum number of physical extents (PEs) used in a volume group when the default PE size (4MB) is not used.
- \* JAGag42679 fix. Some files related to 11.0 support were left on the system after installing version C.7.3. These files are now removed during Ignite-UX install.
- \* JAGag43004 fix. For 11.31 recoveries, stale device files could be left behind after the recovery is complete. This change will now ensure stale device files are not left behind during a recovery.
- \* JAGag43543 fix. Ignite-UX 11.23 install and recovery have been changed to better handle disks that contain remnants from non-default VxFS layout versions DLV6 or DLV7 (supported by VxFS 4.1 and 5.0).
- \* JAGag43765 fix. Overhead space reserved for VxVM layout version DGV 140 (supported by VxVM 5.0) has been increased to handle metadata space needed for all disk geometries.
- \* JAGag44152 fix. Ignite-UX will no longer treat uninitialized



integer variables as a fatal error. Thus `instl_adm -T -f` no longer reports this as an error. The lint checks of `instl_dbg` should be used instead, as in `instl_dbg -l`, to find uninitialized integer variables.

- \* JAGag44273 fix. Updating from Ignite-UX versions B.4.0 through C.6.4 which included 11.22 support to these versions will now work correctly.
- \* JAGag44675 fix. DM names used for bootable VxVM disk groups have been changed to conform to Symantec recommendations. For example, a boot device DM name might be `rootdisk01`. Other disks in the disk group are given DM names such as `rootdg02`.
- \* JAGag44931 fix. When `bootsys` is used on a client system the path used for reboot may be set incorrectly if the client system is currently using VxVM. The `bootsys` command has been changed to correctly set the boot path to simplify reboot for install or recovery.
- \* JAGag45058 fix. Ignite-UX `make_net_recovery` and `make_tape_recovery` have been changed to correctly ignore mounted storage checkpoints to allow saving a recovery archive without errors.
- \* JAGag45510 fix. `manage_index` now has a `-y` option which permits the setting of a `cfg` clause description in an INDEX file.
- \* JAGag45626 fix. Avoid falsely reporting an error message such as `"/opt/ignite/bin/save_config[20]: 12 + 3^J21 ... - 1: Syntax error"` when running `make_net_recovery` or `make_tape_recovery`.
- \* JAGag46564 fix. The `make_sys_image` command will no longer reset the `/etc/group` and `/etc/netgroup` files back to the `newconfig` state when the level is 2. If the old behavior is preferred for some reason, you will have to copy and edit the script to put these files back into the `LEVEL2_RESET` list.
- \* JAGag46696 fix. Ignite-UX client system I/O inventory done to save the system configuration by `save_config`, `make_net_recovery`, and `make_tape_recovery` has been optimized for more efficient I/O data collection. This may significantly reduce the time needed to run these commands on large configurations.
- \* JAGag47172 fix. `check_version` will now display a useful diagnostic ERROR message when a server hostname is not resolvable.
- \* JAGag47788 fix. The `os_arch_post_l` script has been modified as to not cause unwarranted kernel build warnings on 11.23 installs.
- \* JAGag49897 fix. Prevents a situation where the wrong disk could be overwritten during a recovery of a VxVM system without the user knowing about it. See also `/opt/ignite/share/doc/FAQ #1.19`.
- \* JAGag50081 fix. `make_tape_recovery` on Itanium-based HP-UX 11iV3 (B.11.31) systems could fail with the message "ERROR: writetapedb command failed to create boot tape descriptor block."

- Notes related to known problems with this release:

- \* JAGag49135. During Ignite-UX client system boot the console is likely to display the message "sh: pre\_init\_rc: not found". This message may be ignored.

## 2.8 Version C.7.3.148 (9/2007 - Web Release Only)

=====

The C.7.3.148 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

- Fixes for the following Change Requests:

- \* JAGag43543 fix. MAKE\_BOOT errors when installing 11.23 clients with VxVM & VxFS 4.1 have been fixed. These errors occurred on clients with VxFS disk layout version 6 for the root file system.

x ./etc/nsswitch.conf, 382 bytes, 1 tape blocks

x ./monitor\_bpr, 36864 bytes, 72 tape blocks

\* Download\_mini-system: Complete

\* Loading\_software: Begin

\* Installing boot area on disk.

ERROR: MAKE\_BOOT: Volume rootvol does not contain a file system.

The configuration process has incurred an error, would you like to push a shell for debugging purposes? (y/[n]):

- \* JAGag43578. An issue with modifying system parameters when running certain commands was resolved in response to HPSBUX02249.

- \* JAGag46613 fix. save\_config, make\_net\_recovery, and make\_tape\_recovery would fail on systems that have inactive volume groups (which is typical on ServiceGuard clusters). This issue was introduced with the C.7.3.144 Ignite-UX release.

- Notes related to known problems with this release:

There are no new known problems.

## 2.9 Version C.7.3.144 (9/2007)

=====

The C.7.3.144 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

Ignite-UX version C.7.3.144 contains the following new features:

- VxFS 5.0/VxVM 5.0 product support

Ignite-UX C.7.3.144 pre-enables support for the Symantec Vx\* 5.0 products on HP-UX 11i v3 (B.11.31). Ignite-UX will support recovery and cold install of VxFS 5.0 and VxVM 5.0.

To enable support for multiple depots containing multiple versions of VxVM, the behavior of config file parsing, specifically vxvm\_version has changed. Starting in C.7.3.144, the lowest setting of vxvm\_version will be used as the global setting. In prior Ignite-UX releases, the highest setting parsed was used as the global setting. This new behavior is documented in instl\_adm(4) under vxvm\_version.

A recipe for cold installing the Symantec Vx\* 5.0 products on HP-UX 11i v3 release will be included in the Veritas 5.0 Installation Guide for HP-UX 11i v3 when the products release.

Note: Cold install of VxVM 5.0 is only supported on HP-UX 11i v3 (B.11.31). Recovery of systems using VxVM 5.0 is supported on both HP-UX 11i v2 (B.11.23) and HP-UX 11i v3 (B.11.31).

- This Ignite-UX release includes minor changes to default system configuration for HP-UX B.11.31. In particular, conditions based on memory size have been modified to consider memory reserved by system firmware so that default configuration is less sensitive to minor firmware differences. Significant default system configuration changes are not planned for future releases at this time.

- The following manual entries are updated or improved in this release:

- \* ansitape(1M)
- \* auto\_adm(1M)
- \* instl\_combine(1M)
- \* make\_bundles(1M)
- \* make\_medialif(1M)
- \* make\_net\_recovery(1M) and make\_tape\_recovery(1M)
- \* instl\_adm(4)
- \* ignite(5)

- Fixes for the following Change Requests:

- \* JAGaf92170/JAGag34136 fixes. Version checking has been added to

verify that CD/DVD boot media and recovery tapes have the same Ignite-UX versions. Some command messages have been modified to fix grammatical errors. Matching versions are required for correct install and recovery.

- \* JAGag00276 fix. The FAQ has been updated with a statement regarding cloning and Auto-Port Aggregation (APA).
- \* JAGag13596/JAGag17024/JAGag37949 fixes. The problems of having backslash characters in VxVM mount points have been fixed. It is now possible to have a mount point such as `/vxvm/slash\at\end\` and be successful. However, we recommend that mount points include only alphanumeric characters and commonly used printable characters (see the path section of glossary(9)).
- \* JAGag20562 fix. ERROR messages reported when the Ignite-UX boot device can not be determined have been changed to NOTE messages since this condition requires user interaction but does not block install or recovery.
- \* JAGag21603 fix. Ignite-UX has the ability to restore multiple archives from a custom PA-RISC tape.
- \* JAGag21740 fix. For VxVM installs, the requirement for a "rootdg" disk group has been restricted to VxVM 3.5 only. Thus, this will now only apply to B.11.11 and B.11.23 with VxVM 3.5. If the `vxvm_version` keyword is not set in a B.11.23 VxVM install, it will default to 3.5, so the requirement will remain in that case regardless of what software is loaded.
- \* JAGag28869 fix. When different volume groups have logical volumes with the same name `save_config` is now able to save the configuration correctly.
- \* JAGag31530 fix. A rescan ('r') option has been added to allow use of a boot source device that is attached after system boot. This feature may be needed for vMedia DVD devices since USB driver and system firmware simulates device attach during system boot. It is likely that a vMedia boot device will not be automatically found even after rescan due to how the kernel discovers the boot path. The boot source device may be explicitly selected to allow Ignite-UX to continue install or recovery. This fix also includes a change to handle long boot source device special file path names so that loadfile errors do not occur for vMedia devices.
- \* JAGag33077 fix. Tools used to configure disk arrays on PA-RISC systems prior to HP-UX install have been added to the Ignite-UX 11.31 PA-RISC install environment. Arrays should be configured prior to install using EFI tools on Integrity systems.
- \* JAGag35624 fix. The `make_sys_image` command has been changed to correctly calculate the size of file system data represented by large exclude lists.
- \* JAGag35732 fix. Messages reported by `make_tape_recovery` have been changed to remove HP-UX 11.31 related content on HP-UX 11.23 systems.

- \* JAGag35817 fix. Ignite-UX Golden Image and clone install has been changed to correctly preserve saved registry content such as MirrorDisk/UX licenses.
- \* JAGag35950 fix. The bootsys command has been changed to not report bootsys\_prep failure when the reboot command runs very quickly on a client system.
- \* JAGag35970 fix. Ignite-UX now performs I/O inventory using the tape device pass-thru device special files which no longer causes tape devices to be busy and unavailable to other processes.
- \* JAGag37391 fix. The file io.info will now be copied after an install to /var/opt/ignite/local along with the host.info and hw.info files.
- \* JAGag37841 fix. For 11.31 systems with LVM volumes, the disk[] fields in the configuration file generated by save\_config will now be populated with the correct path.
- \* JAGag38182 fix. Fixes an assertion failure abort ("numvols\_before==numvols\_after") that can occur on systems with a sufficiently complex disk group layout.
- \* JAGag38517 fix. Now save\_config will error out if the lvlnboot command cannot query LVM volume group information but still returns success.
- \* JAGag38716 fix. The problem that circular links were handled inconsistently has been fixed. The Ignite-UX recovery tools will error out if a circular link is detected.
- \* JAGag39386 fix. NFS version 2 does not have the ability to handle files larger than 2GB. Ignite-UX make\_net\_recovery has been changed to terminate as well as report an error if an archive is too large.
- \* JAGag39717 fix. The default Ignite-UX AUTO files which control bootloder menu choices has been modified to improve readability.
- \* JAGag40058 fix. Ignite-UX has been changed to use the version of HP-UX 11.31 SWM in it's install environment, instead of the version being installed, so that software configuration is correctly handled.
- \* JAGag40839 fix. Ignite-UX can fail during install/recovery when a disk device is setup in active/passive mode.
- \* JAGag40743 fix. Disks hidden to the user interface via config file variables will no longer be available as replacement disks for recovery processing.
- \* JAGag42165 fix. Disk devices that have a "Device ID" (SCSI DEVICE IDENTIFIER) value containing a newline character caused Ignite-UX to fail. Failure occurs when running rescan\_hw\_host (used by make\_net\_recovery and make\_tape\_recovery) or during installation or recovery.
- \* JAGag42905 fix. Ignite-UX has been fixed to recover non-contiguous

VxVM volumes correctly. In C.7.0 through C.7.2 volumes were always recreated as contiguous. In some cases this issue may have caused failure if volumes originally spanned disks.

\* JAGag43053 fix. The method for calculating VxVM overhead space for volume meta-data has been changed to calculate volume offsets correctly. This change is especially important for VxVM 5.0 use.

- Notes related to known problems with this release:

\* JAGag42952. It is not possible to install an image from 11.31 (IA) custom-built DVD media. The problem manifests itself if a message like this is seen:

```
WARNING: Cannot mount device "/dev/dsk/c0t0d0" on directory
        "/tmp/ign_configure/SD_CDROM" after 10 tries. Ensure the device is
        properly connected, powered on, contains the "golden image" CD-ROM,
        and is ready for reading before continuing.
```

As a workaround when this happens, press CTRL-C and Ignite-UX will ask if you want to stop the installation and push a shell. Answer y(es) to both and then execute these commands:

```
# loadfile -v egrep grep ps
# ps -ef | grep -E "PID|fsdaemon" | grep -v grep
# kill -9 <PID from above ps command>
# /sbin/fs/fsdaemon -f 1
# exit 2
```

The install will continue on from this point as normal.

## 2.10 Version C.7.2 (6/2007)

=====

The C.7.2 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

Ignite-UX version C.7.2 contains the following new features:

- End of support for 11.00 release

This is the final release of Ignite-UX that will contain support for the B.11.00 release and its installation and recovery. In the next release, the Ignite-UX-11-00 bundle and its content will no longer be provided. If you wish to continue to support 11.00 clients, you must keep an Ignite-UX server around with this or an earlier version.

- This Ignite-UX release introduces significant changes to default system configuration for HP-UX B.11.23. These changes are needed to support software that has been added to HP-UX after initial release, better handle larger mass storage devices and support future update to other HP-UX releases. In particular, the default sizes of /stand and / have been increased. Default primary swap size has also been increased for some configurations. These changes are consistent with support for future update to HP-UX B.11.31.

- Ignite-UX will now recover Memory File System (MemFS) file systems. The content is not recovered, but the file systems themselves will be preserved. There is no support for setting these up from cold-install.

- In response to the request to improve I/O inventory performance, Ignite-UX has introduced the ability to block particular paths and protocols during inventory. This can be done by using the "inventory\_block\_path", and "inventory\_block\_protocols" variables either in the first 8KB in \*INSTALLFS or from the hpux boot loader command line. See instl\_adm(4).

- An example script has been added to simplify creation of recovery DVD media: /opt/ignite/data/scripts/examples/make\_opticaldisc\_recovery. This script can be used to create a recovery DVD if the archive will fit on a single media (generally less than 4GB). Use the "-?" option for additional details (e.g. "make\_opticaldisc\_recovery -?").

- The following manual entries are updated or improved in this release:

- \* bootsys(1M)
- \* make\_net\_recovery(1M) and make\_tape\_recovery(1M)
- \* instl\_adm(4)

- Fixes for the following Change Requests:

- \* JAGaf88132 fix. The vgdisplay output of an LVM volume group is no longer displayed in the recovery.log.

- \* JAGag27344 fix. When canceling out of itool on 11.31 IPF SAS clients, the rescan hardware option is now functional.

- \* JAGag29519 fix. The file /usr/conf/mod/core is a kernel module. Beginning with this release, make\_sys\_image will not issue a "core dump file" warning when it detects the file.

- \* JAGag29820 fix. When running previous versions of the save\_config command you may see the following ERROR messages:

```
ERROR: source_read failed: Invalid argument (errno = 22).  
ERROR: sourefile_open: source read: Invalid argument (errno = 22).
```

It is safe to ignore these ERRORS since loadfile is used to look for ISL on each disk to determine bootability during I/O inventory. Beginning with this release, the ERROR messages are redirected to /dev/null.

- \* JAGag30060 fix. The ignite command has been improved to more accurately interpret the output of commands run by ignite so that routine diagnostic messages will not be interpreted as errors. For example, when using ssh to contact a client during an "Add New Client for Recovery" operation, the prompt asking the user to verify the host key will no longer result in a corrupt client directory.
- \* JAGag30076 fix. The bootsys command improves error checking when using SSH to communicate with client systems, and the bootsys(1M) manual entry documentation has been improved.
- \* JAGag30141 fix. Ignite-UX save\_config allows a system to have VxVM volume manager enabled but no disk groups defined.
- \* JAGag30313 fix. Changed the way make\_sys\_image logic is called to correct an issue seen with occasional missing IPD files in the recovery archive.
- \* JAGag30456 fix. The "ignite" command has been enhanced to use SSH X forwarding when displaying the Ignite-UX GUI on a remote X server that is using SSH X forwarding.
- \* JAGag30466 fix. The following error will no longer be encountered when installing VxVM recovery images on hardware containing different disks than the original system contained:  
  
vxvm:vxconfigd: ERROR: Invalid records in file /etc/vx/disk.info
- \* JAGag30566 fix. When installing Ignite-UX on a B.11.31 system, if the /etc/bootptab file is discovered missing, an additional WARNING message will be produced that mentions the possible deselection of the HPUX-DHCPv4 bundle as a root cause of the missing file.
- \* JAGag31525 fix. If a depot has nothing but "hide\_patch\_bundle" bundles in it, make\_config will now supply an sd\_command\_line attribute in the sw\_source to permit patch installs to succeed from the depot.
- \* JAGag31946 fix. The bootsys and ignite commands have been improved to accommodate client systems which have the SSH "Banner" option enabled.
- \* JAGag32380 fix. The make\_ipf\_tape script has been improved to check return codes of all commands that are critical to successfully writing a tape, including the writetapedb command.
- \* JAGag32607 fix. It is now possible to install a system with multi-pathing turned on for devices other than disks. This was only an issue in versions C.7.0 and C.7.1.
- \* JAGag33397 fix. In Ignite-UX versions C.7.0 and C.7.1, any disks that use the fclp fibre channel driver would be reported as "baddisk", and would not be able to be used for install/recovery.
- \* JAGag33450 fix. In Ignite-UX versions C.7.0 and C.7.1 with mixed VxVM disk group versions, Ignite-UX no longer always recovers



systems such that the disk group is the highest version. This change in behavior has been corrected.

\* JAGag33562 fix. In Ignite-UX versions C.7.0 and C.7.1 with pre-B.11.31 multi-pathed installs, the firmware boot path (as reported by setboot) and the LVM boot path (as reported by lvinboot) may be different. This problem has been corrected.

- Notes related to known problems with this release:

\* JAGag34086. There is a problem with the version of SWM used in Ignite-UX versions C.7.0, C.7.1, and C.7.2 where reference bundle wrappers are not installed when filesets that are common to two or more reference bundles are selected. As a result, the products and/or patches in the reference bundles appear unbundled after installation. To workaround this issue, you can install the bundle wrapper(s) after cold installing the system using the command "swinstall -s <source\_depot> <referencebundletag>. ..." where the '.' after the bundle tag indicates to install the wrapper only.

\* JAGag35033. For VxVM installs of 11.11 and 11.23 on multi-pathed disks, if the root disk chosen is not the correct DMP node (i.e. the lowest named disk of the form /dev/dsk/cXtYdZ), the install will fail when it attempts to run mkboot. The workaround is to always chose the correct DMP node. Typically this corresponds to the lowest numerically addressed hardware path to the disk.

\* JAGag35724. For installs of 11.31, there is a problem with the version of SWM used in Ignite-UX versions C.7.0, C.7.1, and C.7.2 where some patches may not load properly. There will be specific NOTE messages regarding patch filesets in the install.log as a result. The utility /usr/contrib/bin/check\_patches will identify patches that are missing filesets. To work around this problem, reinstall the affected patches.

\* JAGag35817. If you clone an 11.23 or 11.31 system instead of using cold install or recovery, MirrorDisk/UX may be disabled if it was installed on the original system. To work around the problem, reinstall MirrorDisk/UX.

## 2.11 Version C.7.1 (2/2007 - Web Release Only)

=====

The C.7.1 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web.

Ignite-UX version C.7.1 contains the following new features:

- A new white paper entitled "Simplified Creation of Bootable CD/DVD Media" is available on the Ignite-UX Web site at:

<http://www.docs.hp.com/en/IUX/infolib.html>

This paper describes how to create custom bootable media for use with two-step media recovery. Since HP-UX 11i v3 (B.11.31) released with Ignite-UX version C.7.0 on the media, you may need custom bootable media for your recovery process.

The `make_media_install` example script was first delivered in Ignite-UX version C.6.2. The white paper documents common use cases for the script.

- The timezone file (`/usr/lib/tztab`) used during cold-install has been updated to reflect the 2007 changes in the USA.
- Fixes for the following Change Requests:
  - \* JAGag01609 fix. The `print_manifest` command will now display the correct driver for devices with a greater than 80 character description field in `ioscan` output.
  - \* JAGag25307 fix. Device special files that are new in B.11.31 and are included in an OS archive will now be removed following the download of the archive, for example, `/dev/rtape/tape1_BEST`, as is done for legacy device special files.
  - \* JAGag25740 fix. A support statement for use of CD and DVD media tools in a manner not specified in Ignite-UX documentation has been added to the Ignite-UX web site content, this document and product packaging.
  - \* JAGag26383 fix. Recovery no longer produces messages such as: "NOTE: krs\_registry\_nofind checking node".
  - \* JAGag26545 fix. The WARNING message from `make_net_recovery` and `make_tape_recovery` on 11.31 indicating that disk and tape device special files may not be correctly restored has been removed. Ignite will now correctly restore these device special files.
  - \* JAGag27668 fix. The assertion failure that occurred when navigating the file systems on the "Filesystem" tab after the user has pressed the 'Go' button on the sanity checks dialog when errors are present, then pressed the 'Ok' button on the error dialog that pops up, and returns to the "Filesystem" tab will no longer occur.
  - \* JAGag28336 fix. The `has_usb` configuration attribute is now correctly interpreted on B.11.31 systems with USB devices attached, and the proper entries will now be present in Ignite's Keyboard selection menu.
  - \* JAGag28363 fix. The `/tmp/set_locale` script used to set the locale has been fixed such that when no CDE bundle is selected in 11.31

installs, it will not produce any garbage messages.

- \* JAGag28623 fix. Question 11.2 in the Ignite-UX FAQ (found in /opt/ignite/share/doc/FAQ) has been updated to provide instructions on how to deal with 11.31 Ignite-UX servers and NFS in particular.
- \* JAGag28975 fix. Selecting a non-default OE (operating environment) by simply adding sw\_sel statements to de-select the default OE and select a different OE will now automatically select the recommended software for that OE.
- \* JAGag29026 fix. The problem that gen\_impacts generated incorrect impacts for hardlinked files has been fixed.
- \* JAGag29707 fix. An extraneous WARNING message stating "Could not create link for device file system: File exists (errno = 17)" when installing a recovery archive or golden image on systems containing USB devices is no longer printed.

- Notes related to known problems with this release:

- \* JAGag21289. Recovery image installs may hang at "\*\* Processed 80% of archive." The hang may also occur at other percentages. This problem has only been observed on HP-UX 11i v2 (B.11.23).
- \* JAGag29519. make\_sys\_image erroneously detects the 11.31 kernel module file /usr/conf/mod/core as a core file. It gives a false alarm during golden image creation.
- \* JAGag29820. If you see the following message when creating a recovery archive on the console or in the recovery.log:

```
ERROR: source_read failed: Invalid argument (errno = 22).  
ERROR: sourefile_open: source read: Invalid argument (errno = 22).
```

you can ignore them safely since the errors come out during I/O inventory where loadfile looks for ISL on each disk to determine bootability.

- \* JAGag30060. When performing an "Add New Client for Recovery" operation in the Ignite-UX GUI or TUI when using SSH to contact the client, a message in a popup dialog that should be a NOTE is incorrectly labelled an ERROR. The message is similar to "Permanently added 'testsys,10.1.50.129' (RSA) to the list of known hosts." This is followed by a popup, labelled ERROR, that states "Unable to set up the client directory for the system: hpgemini", and the client directory setup will not be complete. For more information see the workaround documented in JAGag30060.
- \* JAGag30076. The Ignite-UX documentation describing how to manage clients with bootsys via SSH is insufficient, particularly for users with limited experience with SSH. JAGag30076 contains more information about configuring bootsys to work with SSH, and future Ignite-UX documentation will be improved.
- \* JAGag30141. save\_config fails but returns 0 when VxVM 4.1 is

active but there are no disk groups defined on the system.

\* JAGag30456. When using an SSH tunnel to display the Ignite-UX server GUI back to a remote display, and attempting to use the server to initiate a "Create Network Recovery Archive" operation on a client, that attempt fails with a message similar to "X connection to 15.1.53.31:10.0 broken (explicit kill or server shutdown)."

\* JAGag30466. If you see the following error during the first reboot (Boot\_From\_Client\_Disk) while installing a recovery archive:

V-5-1-11221 vxvm:vxconfigd: ERROR: Invalid records in file /etc/vx/disk.info

you can safely ignore it, since VxVM is regenerating disk.info to match the current disk hardware on the system. This error will not occur on subsequent reboots.

## 2.12 Version C.7.0 (2/2007)

=====

The C.7.0 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes
B.11.31	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.31 Application Media can only be installed on B.11.31).

Because of the following known issues:

- JAGag26545 Device special file names may be different after recovery
- JAGag28336 USB keyboards are not detected during installation
- JAGag28975 Recommended software not always selected
- JAGag29026 Disk space impacts for hardlinked files not correct

Ignite-UX version C.7.0 will be replaced with Ignite-UX version C.7.1, which will be available for download from the Web at:

<http://docs.hp.com/en/IUX/download.html>

The use of Ignite-UX version C.7.0 will only be supported for six months after release.

Ignite-UX version C.7.0 contains the following new features:

- The Ignite-UX bundle structure has been changed. The principal bundle tag of Ignite-UX is now IGNITE instead of the previous B5725AA bundle tag. The OS-specific bundle tags like Ignite-UX-11-23 remain as is, and there is a new tag and bundle for Ignite-UX-11-31.
- For 11i v3 (B.11.31) the SD bundle representing the operating environment (OE) now contains information indicating which bundles are "required", "recommended", and "optional". The make\_config command is enhanced to take advantage of this information and produces a config file that selects the components of the OE based on whether they are required or recommended for the OE chosen. Required OE components are selected for installation and cannot be de-selected. Recommended components are selected by default and can be de-selected. Optional components are not selected by default.

For bundles that are part of an OE, make\_config adds revision information to the sw\_sel tag names so software that is part of the OE can coexist with different revisions of the same software that came from the application media or downloaded from the Web.

make\_config also generates additional categories for OE components so that software can be viewed (and selected) based on whether it is required, recommended or optional.

- The UI and config file syntax has been enhanced to support software having multiple categories.
- For 11i v3 (B.11.31), Ignite-UX will call the swm command to load software instead of the swinstall command. This takes advantage of the improved handling of multi-DVD media sets, as well as improved job and message management. The swm command recognizes most swinstall options, plus additional ones. The sd\_command\_line config file keyword is still used to pass in additional options to the swm command. See the 11i v3 swm-install(1M) manual page for details on options.

The log file produced by swm is /var/opt/swm/swm.log and contains information about the software loaded and software control script output. Because swm calls the swagent process, the /var/adm/sw/swagent.log file can still be useful for troubleshooting. The swm command can be run on a 11i v3 system for viewing the swm log at various levels of verbosity (see swm-job(1M)). The example below will show only errors and warnings of jobID=1 (jobID 1 is typically the job created by the initial system installation):

```
# swm job log -x verbosity=1 1
```

- Ignite-UX server logging has been improved so that install.log file content does not lag behind client system activity.
- The transition links /var/adm/rc.log, /var/adm/shutdownlog, /etc/vtdaemonlog, and /etc/ptydaemonlog that are symbolic links in 11.31 are saved in the archive by make\_sys\_image.
- The following manual entries are updated or improved in this release:

- \* add\_new\_client(1M)
- \* archive\_impact(1M)
- \* auto\_adm(1M)
- \* bootsys(1M)
- \* copy\_boot\_tape(1M)
- \* instl\_adm(1M)
- \* instl\_dbg(1M)
- \* make\_boot\_tape(1M)
- \* make\_net\_recovery(1M) and make\_tape\_recovery(1M)
- \* make\_sys\_image(1M)
- \* save\_config(1M)
- \* setup\_server(1M)
- \* instl\_adm(4)
- \* ignite(5)

- HP-UX 11i v3 (B.11.31) includes significant Mass Storage I/O changes important to understand for correct installation and recovery. For an overview of the mass storage changes in HP-UX 11i v3, see the white paper 'The Next Generation Mass Storage Stack' in the Network and Systems Management section of docs.hp.com, under Storage Area Management.

The Ignite-UX Admin Guide includes additional details regarding I/O configuration during install and recovery. Ignite-UX includes limited functionality for multiple paths to devices to avoid incorrect device reuse. Support for recovery of HP-UX 11i v3 clients also includes agility functionality. Reviewing Ignite-UX install and recovery documentation is recommended to better understand best practice use with HP-UX 11i v3 and to avoid issues.

Devices are typically identified and selected by use of hardware paths in Ignite-UX user interfaces. It is important to note that use of a particular path does not imply special significance for that path in HP-UX 11i v3. In particular, selection of a device using a particular path does not imply that path will be used for boot. HP-UX 11i v3 includes support for agile boot path management and the system will automatically choose the best path for boot.

Both legacy and persistent (new) device special files (DSFs) are created during install and recovery of HP-UX 11i v3. When Ignite-UX creates file system content for HP-UX 11i v3, persistent DSFs are used for LVM volumes and legacy DSFs are used for VxVM volumes.

Recovery of HP-UX 11i v3 mass storage devices uses a unique device identifier to determine correct devices during recovery. The unique device identifier used is a World-Wide Identifier (WWID). This approach provides similar agility to normal HP-UX 11i v3 system operation. When devices are not found due to hardware replacement, recovery is done using the mass storage device at the same hardware path. The detailed methods used to match devices during recovery are specific for each I/O protocol type.

Ignite-UX does not include agile recovery support for SAS devices for HP-UX 11i v2 or HP-UX 11i v3 as might be expected for that I/O protocol. Instead, SAS devices are selected during recovery based on hardware path. During installation Ignite-UX associates sorted SAS hardware paths and physical locations; during recovery Ignite-UX

performs the same association. As a result, hardware paths are consistent for SAS configurations that do not change. If the SAS hardware configuration is changed after installation, SAS hardware paths may refer to different devices during recovery. Interactive recovery should be used if the hardware configuration is changed after installation so that the correct SAS devices are selected. Ignite-UX may add agile SAS recovery support in a future release.

- The way NFS mounts are configured has changed in HP-UX 11i v3. Configuring an HP-UX 11i v3 Ignite-UX server for client NFS access requires use of `/etc/dfs/dfstab` and the `/usr/sbin/shareall` command. See `add_new_client(1M)` and the Ignite-UX Admin Guide for additional details related to correct NFS configuration.
- When installing HP-UX 11i v3 (B.11.31) on HP Integrity systems that support firmware HyperThreading, Ignite-UX will, by default, enable HyperThreading. However, logical CPUs will be disabled in software. To fully enable HyperThreading, use the `"kctune lcpu_attr=1"` command. For more information, see the "Dynamic Logical Processors for Hyper-Threading on HP-UX 11i v3" whitepaper. To disable firmware HyperThreading during system installation, toggle the value of the "Enable Firmware HyperThreading" item in the "Additional" screen of the "Basic" tab of the Ignite-UX itool UI.
- HP-UX 11i v3 includes support for Universal Serial Bus (USB) devices using a new device special file approach. USB DSFs are located in `/dev/deviceFileSystem/Usb`. DSFs in this file system space are dynamically managed by the USB driver stack. Note that USB DSFs for mass storage devices have names which are specific to a particular device (for example `disk@hp-1008+294=A60020000001`).
- Default file system sizes, primary swap size and other default system configuration settings have been changed in HP-UX 11i v3 as compared to prior HP-UX releases. This was important to better adjust to Operating Environment software and computer system hardware. Further tuning of these configuration defaults may be done in a future Ignite-UX release. As before, it may be necessary or appropriate to create custom configurations specific for your systems. Such custom configurations or recovery configurations will not be affected by future default configuration tuning.
- The control scripts executed during the installation and removal of the Ignite-UX product have been updated to make the product safe to install, remove, modify, or list with HP Dynamic Root Disk (DRD).
- In this release of Ignite-UX the ability to run `mediainit` from Ignite-UX has been removed. This capability is no longer needed. Disk devices do not require low-level formatting.
- The three files `iuxguide.pdf`, `sysadm.html` and `diskmirror.pdf` found in `/opt/ignite/share/doc` have been removed from Ignite-UX. The versions of these files packaged in the product were always at least one version out-of-date compared with the Web versions. The most current versions of all Ignite-UX documentation are available at:

<http://docs.hp.com/en/IUX/infolib.html>

- Fixes for the following Change Requests:

- \* JAGae10767 fix. It is now possible to print a client's manifest from the Ignite-UX server GUI.
- \* JAGae60800 fix. It is now possible to create more than 32GB of primary swap for 11.23 installs.
- \* JAGaf30962 fix. During a recovery the "Specify root disk/volume group disks" screen for the wizard UI is no longer displayed since the data on this screen is not valid during a recovery.
- \* JAGaf88049 fix. The auto\_adm command has been extended to manipulate IPF AUTO files.
- \* JAGaf90532 fix. Ignite-UX now correctly handles specific I/O configurations which would cause infinite loops in rescan\_hw\_host.
- \* JAGaf90727 fix. It is now possible to select any configuration on the server for a client which has already completed an install.
- \* JAGaf96587 fix. The Ignite-UX recovery tools have been changed to allow for the use of the new pax format to the pax command to support files 8GB or larger in a recovery archive.
- \* JAGaf98547 fix. Ignite-UX no longer allows for the selection of mediainit for use during an install.
- \* JAGag01376 fix. A note is now printed in the install.log file when the user changes the timezone so that time stamps make sense after the install completes.
- \* JAGag08666 fix. Host name aliases that can be resolved by the Ignite-UX server will now be allowed as bootsys targets.
- \* JAGag10676 fix. Ignite-UX now correctly handles the situation where a String (see instl\_adm(4)) ends with a backslash (\) character. Note that VxVM mount points cannot have backslash characters anywhere in their path.
- \* JAGag11352 fix. Ignite-UX now grays out the environments pull-down when no environments are available for selection in the current config.
- \* JAGag11578 fix. save\_config now correctly handles the situation where a String (as documented in instl\_adm(4)) is written and would normally end with a backslash (\) character.
- \* JAGag12912 fix. Support for the lanconfig\_args keyword has been removed. This was a feature last supported in the B.10.20 release and is not a part of any currently supported release.
- \* JAGag13078 fix. Stale data about environments are now cleaned up when a new config is selected in the UI.
- \* JAGag15081 fix. A sanity check was added to verify the setting of fragsize for HFS file systems. Problems could be encountered



during an install if a file system type had been switched back-and-forth between VxFS and HFS.

- \* JAGag15856 fix. The permissions of configuration files generated by `make_net_recovery` and `make_tape_recovery` are world-readable no matter what `umask` is set to.
- \* JAGag16020 fix. The problem that `save_config` aborted under the condition if the name of a logical volume in `rootdg` matches the name of another VxVM disk group has been fixed.
- \* JAGag16477 fix. The `save_config` command must now be run by the root user.
- \* JAGag16530 fix. The `ansitape` problem causing infinite loops and potential incorrect output is fixed.
- \* JAGag16638 fix. Issues around incorrect return codes from `setup_server` have been resolved, and `setup_server(1M)` has been updated to document all return codes.
- \* JAGag17051 fix. The restriction that `make_ipf_tape` only runs on Itanium systems has been removed.
- \* JAGag18570 fix. It is now possible to give the Ignite-UX server GUI an IP address instead of a client name when adding a client for recovery.
- \* JAGag19437 fix. The setting of `_hp_keyboard` inside all the example config files found in `/opt/ignite/data/examples` was improved to deal with the condition when there is neither a USB nor a PS2 keyboard.
- \* JAGag19965 fix. Prior versions of `pkg_rec_depot` included extraneous boot filesets (BOOT-KRN-11-XX) that were not needed in the tape recovery bundles packaged in the recovery commands `depot /var/opt/ignite/depots/recovery_cmds` when either 1) the full B5725AA bundle was installed; or 2) more than one Ignite-UX-11-XX bundle was installed. The fixed version will produce tape recovery bundles that will match identically the filesets found in the standard Ignite-UX-11-XX bundles. Note that clients that were installed with one of these earlier tape recovery bundles will end up with mismatched filesets when they are updated, and this will have to be cleaned up manually on each affected client. This process is documented in the white paper "Installing and Updating Ignite-UX" available at <http://www.docs.hp.com/en/IUX/infolib.html>. The network recovery bundle is unaffected by this problem.
- \* JAGag20462 fix. `make_[tape|net]_recovery` sessions could sometimes fail to produce an archive when there was an error writing to a logfile. In this case, logging was moved to standard output, potentially resulting in data corruption when certain Ignite-UX commands were used in a pipeline. Ignite-UX no longer writes error messages to standard output when an error is detected while writing to standard error or a logfile.
- \* JAGag21153 fix. `make_[tape|net]_recovery` now handles LOFS mount

points correctly. The files and directories under a LOFS mount point will not be archived by these commands.

\* JAGag22343 fix. A buffer overflow that could occur in the binary configure3 and lead to it core dumping and terminating prematurely was fixed. A message involving long hardware paths could overflow the buffer.

\* JAGag23043 fix. When the ssh option is selected on the boot client for install dialog in the Ignite-UX server GUI, the bootsys command is now run with the '-S' option.

- Notes related to known problems with this release:

\* JAGag13596. The libsmapi library arbitrarily strips backslash characters which precludes the passing of arguments between Ignite-UX and various other components that should have embedded backslash characters in them (see JAGag10676 above). This prevents VxVM for example from having backslash characters in mount points because VxVM as a default tries to include the mount point in volume names.

\* JAGag21603. The ability to restore multiple archives from a custom PA-RISC tape has been broken since the C.6.2 release. Only the archive found as the second file on a tape is recoverable, which is how tapes produced by make\_tape\_recovery on PA-RISC systems are constructed and which are unaffected by this problem.

\* JAGag21806. It is not possible to run the bdf command from a global pre\_load\_cmd script hook in 11.31 installs. There is a simple workaround to move it to a pre\_load\_cmd attached to the "core" sw\_source, and it works as desired. There are no plans to fix this.

\* JAGag26545. During recovery on a system that has more than seven disk and tape devices, Ignite-UX may not successfully remap the device special file names so that they refer to the original devices.

\* JAGag26833. A VxVM volume which has one or more VxVM Dynamic Multi-Path nodes of a disk group disabled will cause an error during make\_net\_recovery, make\_tape\_recovery or save\_config. When save\_config is run as part of any of these commands the diskinfo command will generate an error message such as "diskinfo: can't SIOC\_INQUIRY /dev/rdisk/c\*t\*d\*: No such device or address". A system reboot will workaround this issue.

\* JAGag27344. An install can abort prematurely when installing 11.31 IPF clients which have SAS (Serial Attached SCSI) devices. This error will occur if the install is canceled and the "rescan hardware" option on the UI is selected. The message seen will be:

```
* SAS (Serial Attached SCSI) disk devices (LUNs) found = 3.  
ERROR: run_cmd: cannot execute "/sbin/insf": No such file or  
directory (errno = 2).  
ERROR: Unable to create the krs DSFs. insf returned 1  
NOTE: System rebooting...
```

Shutdown at 14:44 (in 0 minutes)  
System shutdown time has arrived

\* JAGag27422. During recovery Ignite-UX will not save and restore 11.31 persistent device special files in the system dump configuration. Legacy device special files should be used or the dump configuration should be restored after recovery.

\* JAGag27668. After hitting "GO" to initiate a cold-install from the "Filesystem" tab, if you encounter a "pre-install" error in the sanity check analysis, the Ignite-UX UI may fail if you subsequently make an edit in the "Filesystem" tab. The failure results in a pop-up dialog box with this message:

```
-----  
Assertion failed: filesys.c, line 4860
```

```
@(#)ignite/itool (opt) Revision: 10.1050 $Date:  
2006/11/14 21:58:58 $
```

```
I am very sorry, this session must abort.  
Please report this error information to HP support.  
-----
```

To avoid this problem, you can simply switch to another tab before making changes in the "Filesystem" tab. If you have already encountered this assertion, responding "yes" to the question asking whether to restart the user interface should restore Ignite-UX to the same state as it was in before the assertion failure.

\* JAGag28336. When installing a system with a USB keyboard with 11.31, it is not possible to set the keyboard language via the itool Keyboards interface. The itemap command will be run when the system boots the first time to select the keyboard language if `_hp_keyboard` keyword has not been explicitly set in the configuration.

\* JAGag28363. When installing HP-UX 11 v3 (B.11.31), and CDE has not been selected for installation, the following messages may be displayed in the install.log file:

```
cp: cannot access /usr/dt/config/Xconfig: No such file or directory  
/tmp/set_locale[141]: /etc/dt/config/Xconfig: cannot create  
/etc/dt/config/Xconfig: No such file or directory  
chmod: can't access /etc/dt/config/Xconfig
```

These messages can be safely ignored.

\* JAGag28975. When an OE is selected automatically, such as through bootsys or a config file, the "recommended" software may not be selected.

\* JAGag29026. The problem is that `get_impacts` calculates its impact wrong on hardlinked files when their inode numbers are 0.

=====

The C.6.10 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

- Improvements in integration with HP System Insight Manager:

Several Ignite-UX features can now be launched from HP SIM to take advantage of features such as more secure transfer protocols, as well as role-based management. Additionally, a few integration problems were addressed to provide a cleaner, more useful integration.

- Pre-announcement of mediainit removal:

In the next release of Ignite-UX the ability to run mediainit from Ignite-UX will be removed. This capability is no longer needed since disk devices do not actually perform a low-level format in response to mediainit. Running mediainit can take a very long time when unnecessarily run.

- Glossary added to the Ignite-UX Administration Guide:

The Ignite-UX Administration Guide now includes a glossary that provides common definitions for Ignite-UX terms and concepts.

- Fixes for the following Change Requests:

- \* JAGaf08975 fix. Added documentation to the Ignite-UX Administration Guide instructing users to change the archive\_path in the archive configuration file when creating an installation DVD. Also added reminders that golden images are not system-specific recovery archives.
- \* JAGaf92720 fix. Added information about JAGaf39637 partial fix to C.6.2 section.
- \* JAGaf97681 fix. Updated VXVM.RECOVER to provide better expert recovery documentation for systems running VxVM.
- \* JAGag03807 fix. Ignite-UX has been modified to determine if a problem occurred while calling SIM to do transfers of data. In this way we no longer incorrectly create a client directory.
- \* JAGaf78985 fix. Fixes CREATE\_VOLUME errors on 72GB disks during cold installation where overallocation occurs in VxVM disk groups.

This problem could originally be reproduced on both 72GB and 18GB disks. The problem now remains only on Seagate 18GB drives of types ST318203FC & ST318203LC. The workaround for these two 18GB drives is to change the allocation of the volume causing the error to 'Fixed MB' and reduce the allocation by the difference between the 'Need' & 'available' amounts reported in the error.

- Notes related to known problems with this release:

- \* JAGae60800. Ignite-UX cannot create primary swap volumes greater than 32GB on 11.23 installs.
- \* JAGag10676. Ignite-UX cannot handle the situation where a String (see `instl_adm(4)`) ends with a backslash (\) character.
- \* JAGag15856. The Ignite-UX recovery tool cannot set correct permissions on configure files generated by the tool if `umask 027` is set on the system.

#### 2.14 Version C.6.9.150 (9/2006 - Web Release Only)

=====

The C.6.9.150 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

- JAGag15271. An issue with the configuration of Ignite-UX during installation was resolved in response to HPSBUX02157.
- When booting from media created using Ignite-UX version C.6.9.141, and switching to an Ignite-UX server running Version C.6.9.150, or archive media created with that version, you may see a message similar to the following:

NOTE: The version of Ignite-UX on the server you are using (C.6.9.150) is different than the version of Ignite-UX that the client booted (C.6.9.141). However they are within an allowable difference to continue.

This configuration, and the inverse, is supported and you may safely ignore the message.

- All other content is identical to Version C.6.9.141.

2.15 Version C.6.9.141 (9/2006 - Media Release)

=====

The C.6.9.141 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

- Support for 11.23 compressed install kernels

The Ignite-UX install kernels (/opt/ignite/boot/Rel\_B.11.23/WINSTALL and IINSTALL) are now shipped as gzip compressed files to save disk space and transfer times when booting. The secondary boot loaders shipped with Ignite-UX understand and support compressed kernels to enable this when booting over the LAN. The bootsys command will uncompress these kernels on the client side when that is used to initiate an install. However, the kernels put on a PA-RISC tape via make\_medialif are uncompressed due to the needs of vPars.

NOTE: If an attempt is made to boot a compressed kernel with firmware which does not support this feature, you will see a message such as:

Example of an IPF failure:

-----

HP-UX Boot Loader for IPF -- Revision 2.027

Booting from Lan

Obtaining size of AUTO (26 bytes)

Downloading file AUTO (26 bytes)

Press Any Key to interrupt Autoboot

AUTO ==> boot Rel\_B.11.23/IINSTALL

Seconds left till autoboot - 0

AUTOBOOTING...Obtaining size of Rel\_B.11.23/IINSTALL (20295381 bytes)

Downloading file Rel\_B.11.23/IINSTALL (20295381 bytes)

Couldn't read ELF header.

loading failed

Example of an PA-RISC failure:

-----

ISL Revision A.00.44 Mar 12, 2003

ISL booting hpux KernelPrompt "Choose Operating System to Install :" 120 1

1. target OS is B.11.00

2. target OS is B.11.11
3. target OS is B.11.23 PA
4. Exit

Choose Operating System to Install :3

Boot  
: lan(0/1/2/0;0)/boot/Rel\_B.11.23/WINSTALL  
Exec failed: Exec format error

Action:

-----

This situation should never be encountered during normal use. If these symptoms are encountered, check the configuration of the Ignite-UX server from which the system installation was initiated.

- VxFS 5.0/VxVM 5.0 product support

The Ignite-UX C.6.9 version is required for limited support of the Vx\* 5.0 products on B.11.23. Ignite-UX supports recovery but not cold install of VxFS 5.0 and VxVM 5.0. See the documentation for these products for the supported upgrade path.

- Fixes for the following Change Requests:

- \* JAGaf47763 fix. Added documentation to the Ignite-UX Administration Guide warning that APA is not supported with bootsys.
- \* JAGaf61462 fix. The `instl_adm` utility will now issue a NOTE when a zero-length INDEX file is encountered.
- \* JAGaf73240 fix. Added instructions to the Ignite-UX Administration Guide on how to enhance the locale information for non-English locales as found in `/opt/ignite/data/examples/core11.cfg`.
- \* JAGaf82070 fix. Added the warning against enabling largefiles on the boot file system to the Ignite-UX Administration Guide.
- \* JAGaf82226 fix. Added instructions to the Ignite-UX Administration Guide on what to do if a user has no matching OE media to use for two-step media recovery.
- \* JAGaf88786 fix. VxVM volume names that contain quote characters can now be installed and recovered. There is no need to rename volumes prior to creating a recovery archive.
- \* JAGaf94686 fix. The Ignite-UX server GUI was changed to check for and warn the user of the case where two clients have the same NIC address. Now the icon name should always match the client it belongs to.
- \* JAGaf95447 fix. The manual entry `instl_adm(4)` was modified to include a discussion of why using `swinstall` from any command or script hook is inadvisable.

- \* JAGaf97739 fix. The network setup screen during a cold install has been fixed to allow for canceling out if entered by mistake.
- \* JAGaf97890 fix. The `make_tape_recovery` command now rewinds the tape when it completes recovery archive writing.
- \* JAGaf98623 fix. Added a notice to the Ignite-UX Administration Guide that the `execve` warning messages printed by the kernel during Itanium-based tape boot are to be ignored.
- \* JAGaf99217 fix. The `-l` option added to `make_ipf_tape` allows the user to save the LIF volume on a system. The option was previously available in `make_medialif`.
- \* JAGaf99481 fix. The issue of not loading in the right amount command has been fixed.
- \* JAGaf99564 fix. The `/tmp/dummy` file is no longer used in `make_tape_recovery` as a temporary file.
- \* JAGaf99646 fix. The problem that `list_expander` core dumps when there is no logical volume in a disk group has been fixed.
- \* JAGaf99822 fix. The problem where `bootsys` issued an error 'Server signature file "hostname.iux\_sig" is not present' when run by a non-superuser has been fixed.
- \* JAGag00870 fix. The problem of not being able to load `VxVM` commands in expert recovery has been fixed.
- \* JAGag01249 fix. The problem in the expert recovery shell that some needed commands are not loaded back in after they have been removed has been fixed.
- \* JAGag01472 fix. A change was made to the Ignite-UX cold install GUI so that when the help button is pressed the correct help topic is found and displayed.
- \* JAGag01767 fix. When large disks (300GB or so) are placed in non-root LVM volume groups, the default physical extent size is now automatically increased to prevent the `max_physical_extent` value from increasing beyond its maximum value of 65535. This was already being done for the root volume group.
- \* JAGag03107 fix. The problem with an invalid IPF recovery tape archive label has been fixed.
- \* JAGag03200 fix. The problem that `list_expander` mishandled skipped directories and files with common paths has been fixed.
- \* JAGag03266 fix. The restriction that the `-f` option cannot be used with `-A` option in `make_net_recovery` and `make_tape_recovery` has been documented.
- \* JAGag07027 fix. The `auto_adm` command will no longer sometimes incorrectly report that legal "timeout" or "default" values are invalid.



\* JAGag07927 fix. Ignite-UX provides the full path to the disks for all the vxvmbot commands called in save\_config.

- Notes related to known problems with this release:

\* JAGaf97681. Expert recovery shell gives obsolete information not applicable to VxVM 4.1.

\* JAGag03807. If you are experiencing a core dump of ignite when trying to add a client for recovery from SIM, you will have to go to the client directory on the server (/var/opt/ignite/clients) and remove the directory which has the name of the client you are trying to add. If the directory is a symlink, then both the link and the target need to be removed. Then, retry adding the client using the ignite user interface, but do not enter from SIM; call ignite directly.

\* JAGag08623. The necessary conditions for problems discussed in Section 5.14 are larger than first thought. In all cases, installs can be completed by rebooting the client.

\* JAGag10506. Itanium systems using VxVM 5.0 for the root volume and DMP may create recovery archives that are not be recoverable. Due to a VxVM command output change, section 2 of an EFI partitioned disk, such as a boot disk, may not be handled correctly. The save\_config command may generate a message such as "pathCnt > 1 : The specified number is not valid for this command". Creation of the recovery archive may complete but this archive may not work during recovery install.

## 2.16 Version C.6.8 (6/2006)

=====

The C.6.8 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
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B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

- 4 GB patch inclusion into B.11.11 install kernels:

The Ignite-UX B.11.11 install kernels now support files on ISO9660 media (CDFFS) which are greater than 2 GB in size. This was accomplished by inclusion of PHKL\_34153 into all three kernels.

Please note this patch increases the maximum size of a file on custom

DVD media from 2,147,483,647 bytes (2 GB) to 4,294,967,295 bytes (4 GB). If an archive file, for instance, grows beyond this 4 GB maximum, then the install kernel will not be able to read it.

NOTE: When using older versions of Ignite-UX, you may have encountered the lack of this patch if you see text like the following during an archive restore from a custom DVD:

```
* Loading_software: Begin
* Installing boot area on disk.
* Formatting HP Service Partition.
* Enabling swap areas.
* Backing up LVM configuration for "vg00".
* Processing the archive source (hp client archives).
* Thu Apr 31 12:34:56 EST 2005: Starting archive load
  of the source (B.11.11 client archive PA).
* Completed 0% of archive
```

```
gunzip: stdin: unexpected end of file
pax_iux: The archive is empty.
ERROR: Cannot load OS archive (B.11.11 client archive PA)
```

The configuration process has incurred an error, would you like to push a shell for debugging purposes? (y/[n]):

- Ignite-UX may now use ssh (secure shell) for initiating make\_net\_recovery, make\_tape\_recovery, and bootsys sessions.

Implemented Enhancement Request JAGae24657. The Ignite-UX ignite and bootsys commands may now optionally use ssh instead of remsh/rexec/rcp for initiating client make\_[tape|net]\_recovery sessions and for preparing clients to be rebooted for new operating system installations. Please note that make\_[tape|net]\_recovery continues to use NFS for copying archives to and from the Ignite-UX server. See ignite(5) and bootsys(1M) for more information.

- Serial Attached SCSI (SAS) support

Installation and recovery using Serial Attached SCSI (SAS) devices is introduced in this version of Ignite-UX for HP-UX 11i v2.

Addressing of SAS devices is significantly different from other SCSI devices. In general, there is not a consistent association between hardware paths and SAS devices. SAS devices are identified by I/O software using a globally unique identifier.

To help users identify SAS devices during installation and recovery, Ignite-UX uses a device attribute called physical location. The physical location indicates the enclosure and bay where the device is located. For example, a physical location may be "SAS:ENC01:BAY01".

Ignite-UX does not include agile recovery support for SAS devices as might be expected for that I/O protocol. Instead, SAS devices are selected during recovery based on hardware path. During installation Ignite-UX associates sorted SAS hardware paths and physical locations; during recovery Ignite-UX performs the same association. As a result, hardware paths are consistent for SAS configurations that do not change.

If the SAS hardware configuration is changed after installation, SAS hardware paths may refer to different devices during recovery. Interactive recovery should be used if the hardware configuration is changed after installation so that the correct SAS devices are selected. Ignite-UX may add agile SAS recovery support in a future release.

- Direct tape boot for Itanium-based systems with firmware support

Direct boot of Itanium-based systems from tape devices is introduced in Ignite-UX version C.6.8. Recovery tapes created by Ignite-UX now conform to the UEFI 2.0 boot standard as well as the ANSI Standard X 3.27 for tape labels.

The C.6.5 (12/2005) version of Ignite-UX included tape format changes to help enable direct tape boot for Itanium-based systems. However, changes just prior to acceptance of the UEFI 2.0 standard required changes to the Ignite-UX recovery tape format. Therefore, tapes created using Ignite-UX versions C.6.5 through C.6.7 continue to be supported for two-step recovery, but will not work for direct boot from tape devices.

In order to use direct boot from tape, you will need an Itanium-based system or firmware upgrade which supports direct tape boot. Direct tape boot may not be supported with some I/O interfaces. Some Itanium-based systems may never have firmware support for direct tape boot.

Itanium-based system boot tapes include significantly more files than those created for PA-RISC systems. Support for the two-step media recovery process continues. Use of two-step recovery requires use of HP-UX installation or custom boot media containing matching Ignite-UX version boot content.

- Now providing a PA (as well as IPF) version of `/opt/ignite/lbin/ansitape`.

- Fixes included in previous releases:

- \* JAGaf62326. The fix for JAGaf62326 was addressed in Ignite-UX version C.6.3, but was left out of the release notes.

- \* JAGaf87927. The fix for JAGaf87927 was addressed in Ignite-UX version C.6.3, but was left out of the release notes.

- Fixes for the following Change Requests:

- \* JAGaf82161 fix. The problem that Ignite-UX recovered multiple dump volumes on VxVM system incorrectly has been resolved.

- \* JAGaf85472 fix. Ignite-UX server setup did not handle multiple pieces of media when creating depots. Now it has been modified to prompt for a piece of media, add it to the depot, and then prompt again for more until the user states that they are done.

- \* JAGaf85738 fix. The `make_[tape|net]_recovery` commands no longer falsely report success if the command is interrupted.

- \* JAGaf87740 fix. The issue where save\_config did not copy with layered VxVM volumes has been addressed.
- \* JAGaf87995 fix. The unexpected file /make\_sys\_image.log is no longer left on a system after running make\_[tape|net]\_recovery.
- \* JAGaf88442 fix. The save\_config command no longer treats an unmounted volume in a non-root disk group as a dump device.
- \* JAGaf89085 fix. When the bootsys command finds that its log file is not writable, it no longer incorrectly runs bootsys\_prep.
- \* JAGaf89552 fix. The hang caused by leaving a /tmp/dummy file on a system after make\_ipf\_tape command runs unsuccessfully has been fixed.
- \* JAGaf89888 fix. Modified the WARNING message regarding direct tape boot for Integrity tape recovery.
- \* JAGaf90531 fix. Added additional information about EVA 3000/5000 disk arrays in Section 4.3 of these release notes.
- \* JAGaf90544 fix. Updated make\_tape\_recovery(1M) to more accurately reflect the disk space that is required in the directory where the LIF volume will be assembled.
- \* JAGaf90651 fix. When Ignite-UX is removed via swremove, it will no longer truncate /etc/bootptab.
- \* JAGaf91254 fix. The problem that swap/dump entries were not merged into /etc/fstab correctly after recovery has been resolved.
- \* JAGaf91338 fix. Config files with unusually long text lines (>3000 chars) no longer cause an awk complaint in make\_medialif.
- \* JAGaf91346 fix. Removed examples of deprecated options (-b and -f) from archive\_impact(1M).
- \* JAGaf91347 fix. Improved the SYNOPSIS section of bootsys(1M) to better document the available options.
- \* JAGaf91353 fix. Added print\_manifest(1M) to the SEE ALSO section of make\_net\_recovery(1M) and make\_tape\_recovery(1M).
- \* JAGaf91522 fix. The sd\_command\_line descriptions found in instl\_adm(4) have been corrected and enhanced.
- \* JAGaf93292 fix. Extended the WARNING message to show how to manually fix the problem of crashconf reporting zero size.
- \* JAGaf93502 fix. For LVM volume groups that have both physical volume groups and standalone disks outside of the physical volume groups, those standalone disks will now be included in save\_config output.
- \* JAGaf93543 fix. The problem where Ignite-UX recovery may hang when

the system contains a mix of LVM and VxVM volumes has been fixed.

- \* JAGaf94133 fix. Extended the WARNING messages in make\_sys\_image to warn the user to check the system if ACLs are detected.
- \* JAGaf95317 fix. The problem where bootsys reports the error message "Invalid syntax for -V option" for legal variable values has been resolved.
- \* JAGaf96450 fix. An error message is now issued by bootsys if the kernel and RAM FS files transferred to the client do not pass file integrity tests after being transferred.
- \* JAGaf96632 fix. The filtering of the INDEX configurations to match the release of install kernel that was booted no longer allows some entries that are not appropriate.
- \* JAGaf96733 fix. When selecting another root disk, the Basic tab now shows the path and size info for the disk.

- Notes related to known problems with this release:

- \* JAGaf88786. VxVM volumes that contain quotes in their name cannot currently be installed or recovered. If you have a volume name that contains a quote, for example "abc!j"5zvol", you can rename the volume. To perform this task, first unmount the volume, then issue the command line:

```
# vxedit -g rootdg rename "abc!j"5zvol "abc!jq5zvol"
```

You may then need to edit the /etc/fstab to record the name change, and then remount the volume.

- \* JAGaf95997. Current implementation requires that if you do not want the primary VxVM dump volume to be named "swapvol", it must be named "dumpvol". If you use names other than "dumpvol" or "swapvol" for your primary dump device, an Ignite-UX recovery will not be able to restore it correctly. This restriction applies to both VxVM 3.5 and VxVM 4.1 beginning in Ignite-UX B.4.0.
- \* JAGaf99481. When using expert recovery on 11.23 systems the /sbin/umount of /ROOT/stand will fail. To workaround this, use the "l. Load a file" option to load /sbin/fs/vxfs/umount and repeat.
- \* JAGaf99822. When a non-root user attempts to use bootsys, an error message is seen regarding a signature file. The only method that works with this release is to run bootsys as root.
- \* JAGag01472. When the help button is pressed during a cold install on an IPF system a dialog will come back saying that the help topic could not be found.

## 2.17 Version C.6.7 (3/2006)

=====

The C.6.7 release of Ignite-UX supports the the following HP-UX

release/architecture combinations:

HP-UX release    HP 9000 systems    HP Integrity systems

B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

Documentation missing in this release:

- The Japanese-translated release notes for this release are not included. When they are available, they will be added to the Ignite-UX Web site for download.

Changes in this release include:

- Fixes included in previous releases:

- \* JAGaf22673. The fix for JAGaf22673 was addressed in Ignite-UX version C.6.3, but was left out of the release notes.

- \* JAGaf68171. The fix for JAGaf68171 was addressed in Ignite-UX version C.6.3, but was left out of the release notes.

- Fixes for the following Change Requests:

- \* JAGae59249 fix. The restoration failure caused by /d\_cfg\_mnt\_sb61 and its subdirectories has been fixed.

- \* JAGae96906 fix. make\_sys\_image can now correctly handle blank lines in /stand/bootconf.

- \* JAGaf19539 fix. It is now possible to recover VxVM disk groups that fully allocate the disk space available to them.

- \* JAGaf73861 fix. save\_config now correctly handles multiple boot volume groups on a system. This may occur when a system has boot volumes other than the currently active boot volume (for example, if multiple installs to different volume groups have been done).

- \* JAGaf75363 fix. Ignite-UX now removes the make\_sys\_image lock file if make\_sys\_image receives a SIGHUP signal.

- \* JAGaf76729 fix. The make\_net\_recovery command now has a -N option to allow for the creation of uncompressed archives.

- \* JAGaf76960 fix. The make\_arch\_config command no longer fails when LDAP is used for hostname resolution.

- \* JAGaf77298 fix. "Software" is now spelled correctly on the "Select Additional Software" screen of the Ignite-UX wizard user interface.

- \* JAGaf77559 fix. Ignite-UX can now display help volumes on IPF systems during a cold install.
- \* JAGaf78187 fix. If the mounted storage checkpoints are detected on a system, the following warning message will now be displayed and the recovery process will continue.  
  
"This mount entry may be Mounted Storage checkpoint. It will be ignored."
- \* JAGaf78607 fix. Ignite-UX can now handle displaying mount points which are longer than 12 characters long on the summary screen.
- \* JAGaf78901 fix. The `make_ipf_tape` script has been enhanced to validate the return values from the commands executed to ensure that everything worked correctly.
- \* JAGaf79322 fix. The section on building an installation DVD in the Ignite-UX Administration Guide has been revised to add the correct steps for the `lifs` command on systems that support large files.
- \* JAGaf80237 fix. The `/sbin/fs/vxfs4.1` directory is now removed if `/sbin/fs/vxfs4.1/bcheckrc` ( delivered by Base-VXFS ) is not present. This solves the problem of leaving extraneous commands around when the whole product is not installed, but not remove it if the product `_is_` installed.
- \* JAGaf80523 fix. The word "initial" is now spelled correctly in the Ignite-UX user interface.
- \* JAGaf80683 fix: Clarified an error message from `make_medialif` with regard to usage of the `-r` and `-o` options.
- \* JAGaf81152/JAGaf83773 fix. Ignite-UX can now handle directories that have " and ' characters embedded in their path components, such as `_!;!bw"!#4!a!"w!#4!bw"2"`. Note that other system software may not support unusual characters. For VxVM installs to work, you must have a version of Ignite-UX that fixes JAGaf88786 (C.6.9 or later).
- \* JAGaf82695 fix. `pkg_rec_depots` now includes product level control scripts which will then handle, via `preinstall`, cleanup of obsoleted filesets.
- \* JAGaf82971 fix. Fixes an uninitialized variable within the `instl_adm` command. Before this change, using `instl_adm` to change default networking parameters could, on occasion, set the "system\_name" attribute to a random string.
- \* JAGaf83107 fix. Fixes an issue in the algorithm used to determine the volume sizes when the volumes are mapped to multiple disks and the disk capacity is insufficient. The issue caused the "net\_cfg\_prep" executable to run out of memory during the installation/recovery. Other executables that share this algorithm were also affected by this problem (`instl_dbg`, `itool`, etc.).

\* JAGaf83588 fix. Improved the performance of the make\_config command when operating on depots containing bundles that have content software specifications that are not fully qualified. Runtime on some depots went from 30 minutes to 5 minutes with this fix.

\* JAGaf87899 fix. The make\_media\_install script will no longer fail when given a -r B.11.00 argument.

\* JAGaf88091 fix. A message warning users that IPF recovery tapes requires two-step media process has been restored.

- Notes related to known problems with this release:

\* JAGaf78985. It is still possible to overallocate a VxVM disk group such that it is not recoverable. If the reserve sectors are force allocated, then on recovery, Ignite will complain that the installation is short by some small amount, usually less than 128 KB. In this case, the user must decrease the volume size by at least the amount in the error message and then continue the installation.

\* JAGaf82161. During a recovery, Ignite may change the configuration when the configuration includes multiple dump volumes on VxVM.

\* JAGaf86732. A vPar does not correctly handle a bootsys AUTO file and may not boot the correct install kernel in some situations.

## 2.18 Version C.6.6 (1/2006)

=====

The C.6.6 release of Ignite-UX supports the the following HP-UX release/architecture combinations:

HP-UX release	HP 9000 systems	HP Integrity systems
B.11.00	Yes	No
B.11.11	Yes	No
B.11.23	Yes	Yes

This version can be installed on any server running one of the above releases of HP-UX when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

Documentation missing in this release:

- The release notes for this release are only available in English.

Changes in this release include:

- Slow network boot on PA-RISC fixed:

When performing a network boot installation of HP-UX 11i v2 (B.11.23) on a PA-RISC client using Ignite-UX versions C.6.4 and C.6.3, the



time required to load and boot the install kernel could increase from the normal 1 to 5 minutes up to 15 to 90 minutes. This issue has been corrected.

- Fixes for the following Change Requests:

\* JAGaf82307 fix. For volumes managed by LVM, when the locale environment variables are set to a value other than null or "C", recovery archives no longer silently omit LVM volumes.

- Notes related to known problems with this release:

\* JAGaf76960. Ignite-UX C.6.2 make\_net\_recovery fails in an LDAP environment on Itanium-based systems.

\* JAGaf78901. When "rm" commands executed by make\_ipf\_tape fail, the resulting tape may not work.

\* JAGaf82161. During a recovery, Ignite may change the configuration when the configuration includes multiple dump volumes on VxVM.

\* JAGaf83107. When net\_cfg\_prep runs out of memory, the recovery fails.

The workaround for this problem depends on if you are using make\_tape\_recovery or make\_net\_recovery.

If you are using make\_tape\_recovery, first run make\_tape\_recovery in preview mode with the -p option (and any other options you normally use):

```
# make_tape_recovery -p ...  
# cd /var/opt/ignite/recovery/latest
```

Edit the system\_cfg file and remove any lines that look like:

```
disk[???]
```

In the logical volume definitions (the text in the [] shown above as ??? will be a hardware path or variable name, e.g. \_hp\_root\_disk).

Continue with the creation of the recovery tape by running the same make\_tape\_recovery command, but with the -r option instead of the -p option (to resume the creation of the recovery tape that was just previewed).

When using make\_net\_recovery, you can edit the system\_cfg file of the network recovery image you are attempting to recover and remove the disk [???] entries in the logical volume definitions as indicated above.

### 3. General Features

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Benefits:

- Ignite-UX is intended to address the needs of customers performing system installations and recoveries, often on a large scale. It provides the means for creating standard system configurations for reuse. It provides the ability to capture an installed system into an image, and use that image to quickly install standard systems. Ignite-UX also permits post-installation customizations, and is capable of both interactive and unattended operating modes.

#### Features:

- The installation sessions for multiple targets can be controlled from a single server in a true client/server model. A user interface is provided to run on the server and manage multiple simultaneous installation sessions. Alternatively, a single installation session can be controlled from the target machine if that is more convenient for the user. An installation server with the C.\* version of the product can itself be running any version of HP-UX B.11.\*. For more information, see the chapter on booting and installing clients from the server and the chapter on booting and installing clients from the client in the Ignite-UX Administration Guide.
- The user interface has a tabbed dialog that presents configuration capabilities without overwhelming the casual user. In addition, a wizard mode is available for the first-time user. See the section on installation using the Ignite-UX GUI in the Ignite-UX Administration Guide for more information.
- Loads can occur from multiple software sources in a single installation session. For example, you could install your base operating system from one SD depot, a set of patches from another depot, and any applications you want from a third depot all in a single session. See the section on using configuration files in the Ignite-UX Administration Guide for more information.
- In addition to the continued support of SD software sources, Ignite-UX also supports tar and cpio (and pax for B.11.31 only) format archives. Tools are provided to help you create a "golden system image" if you wish to install a common configuration. See the chapter on golden images in the Ignite-UX Administration Guide for more information.
- It is easy to create a system that is ready to go as soon as the installation session completes. Many of the tasks which are typically performed as separate steps after an installation have been incorporated into the installation process. Ignite-UX allows you to specify what kernel parameters you want set and what user-supplied scripts you would like to run as part of the session. Many different script hooks are provided so you can do your own customizations during and after the installation. Also, the host and networking information which must normally be supplied at first boot can be specified at installation-time. For more information on user-supplied scripts, see the section regarding the Advanced Tab of the user interface, and the chapter on customizing your installation in the Ignite-UX Administration Guide. For more information on setting kernel tunables, see the section on using configuration files in the Ignite-UX Administration Guide.

- It is possible to create a common configuration for your particular needs, create an image of it, and then quickly apply that configuration to multiple installation targets. See the chapter on golden images in the Ignite-UX Administration Guide for more information.
- Ignite-UX allows you to set up a configuration and then use it to install a target machine with no further user interaction. This can be done in both the initial installation and the reinstallation cases. See the chapter on automating installations in the Ignite-UX Administration Guide for more information.
- Ignite-UX provides a tool to scan a system and produce a report detailing what hardware is present, how the disks are used, what kernel modifications have been made, and what software has been installed. This report can be customized to meet your needs. See `print_manifest(1M)` for more information.
- Ignite-UX provides a mechanism to construct your own customized bootable installation media. See the chapter on creating your own installation media in the Ignite-UX Administration Guide for more information.
- Ignite-UX provides tools to enable consistent, reliable recovery in the event of a catastrophic failure of the system disk or root volume group. See `make_net_recovery(1M)` and the chapter on recovery in the Ignite-UX Administration Guide for more information.
- Online contextual help information is available for all functions of Ignite-UX by pressing F1 while the object is highlighted in the user interface. You can also get general help for a given dialog by selecting the Help button.
- For more details, see the documents located at:

<http://docs.hp.com/en/IUX/infolib.html>

#### 4. Known Issues

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##### 4.1 Open Critical/Serious Customer-Found Defects

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Known customer-found critical/serious defects are listed in known problems associated with each release. When these defects are resolved they will be listed in the change content for the release where they are fixed.

##### 4.2 HP Auto-Port Aggregation (APA)

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Clients whose primary LAN is configured with HP Auto-Port Aggregation, APA, (bundle tag J4240AA) can only be successfully installed with `/opt/ignite/bin/bootsys` if the LAN is disaggregated during the bootsys process. During the HP-UX installation process, the APA software is not

present and therefore the virtual LAN configuration is not valid.

#### 4.3 EVA GL (EVA3000/EVA5000) Disk Arrays

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With new firmware released for the EVA GL (EVA3000/EVA5000) disk arrays (in December 2005) all of the previous limitations with Ignite-UX have been removed. If the array is running the new firmware, Ignite-UX supports installation and recovery of systems using the EVA GL disk arrays.

To determine if you are running a version of firmware for these arrays that is supported with Ignite-UX, look at the ioscan output on a system connected to it. In the ioscan output for LUNs, the array will be a string that starts with "HSV". Look at the following table to see if your array firmware is supported by Ignite-UX:

Array	Not Supported	Supported
EVA3000	HSV100	HSV101
EVA5000	HSV110	HSV111

If you are running SecurePath with the newer firmware, you must be running at least version 3.0F SP1 of SecurePath.

If you are running older firmware (when the ioscan description for a LUN shows HSV110 or HSV110), Ignite-UX does not support those EVA GL (EVA3000/EVA5000) disk arrays. The following limitations apply:

1. System installation from a golden image is not supported if an EVA GL disk LUN is included in any volume group to be created by Ignite-UX. This includes the root volume group.
2. Recovery (tape or network) is not supported if a volume group that is recreated includes any disk LUNs belonging to an EVA GL array. This includes the root volume group.
3. Any volume group containing EVA GL array disk LUNs may need to be manually imported post recovery.
4. The disk device file names for EVA GL array disk LUNs may change during a recovery session as instance numbers for hardware associated with the array are not preserved.
5. When adding a new client to an Ignite server via the ignite command (or by running add\_new\_client manually), if the client has an EVA GL connected, the process may hang and fail to complete. The rescan\_hw\_host command that hangs can be killed manually.

Please note that this is not considered a defect in Ignite-UX or in the combination of SecurePath and EVA GL disk arrays.

#### 4.4 Active/Passive Devices Disconnected for Install & Recovery

=====

During HP-UX 11i v3 installation and recovery, connected Active/Passive devices will cause long delays (one hour or more) or may cause a system

to hang. Similarly, connecting an Active/Passive device before installing the Active/Passive Switch (APSW) plug-in can cause some commands to take a long time. Disconnect any Active/Passive devices connected to your system before installing or recovering HP-UX 11i v3. After install or recovery it is important that the APSW plug-in be installed before connecting an Active/Passive device to the system.

## 5. Known Problems and Workarounds

=====

This section describes known problems with the Ignite-UX product as well as workarounds to these problems. More detail is often available in the FAQ available from:

<http://docs.hp.com/en/IUX/faq.html>

### 5.1 Required Patches

=====

- Patch PHCO\_31903, s700\_800 B.11.11 libc cumulative patch, is required for the correct execution of list\_expander on B.11.11 systems, and patch PHKL\_31500 is required on B.11.23 systems that are running B.11.23 September 2004 or later.

These patches supply a fix for nftw that stops it from running stat on symlinks. In an automounter situation if there is a nonresponding NFS file system, it causes list\_expander to hang on any symlink pointing into it. The defect was not in libc.1, only in libc.2 from B.11.11 onwards.

- When creating a system archive via make\_sys\_image or make\_net\_recovery, the pax utility is used. You should install the latest patch for pax on the machine where you will be creating your archive.

The patch numbers are:

B.11.11: PHCO\_32438 s700\_800 11.11 pax(1) cumulative patch  
B.11.23: PHCO\_31634 s700\_800 11.23 Cumulative changes to pax(1)

- When creating large system archives (greater than 2 GB) over an NFS mount (which is the case when using make\_net\_recovery), both the client and server must be capable of NFS PV3. All currently supported HP-UX releases support NFS PV3.
- When an Ignite-UX server's IP address is changed via set\_parms, it is desirable for the default install server information set by instl\_adm (in the install kernels) to be changed to reflect the server's new IP address. This functionality is enabled by patches PHCO\_34837 (B.11.11) and PHCO\_34838 (B.11.23).

### 5.2 General Issues

=====

- If an installation does not seem to be making progress after a

reasonable amount of time (the log file is not getting updated); check the client console. There are some cases where errors are not written to the log file, but are displayed on the console. Normally, the log file should be updated every few minutes. The only known exception is when a large archive is being extracted.

- Ignite-UX can sometimes assign the "wrong" swap volume to be "primary". If you set up a primary swap-only volume, and then set up a large swap/dump volume, the swap/dump volume can become the primary swap volume. This is done to ensure the dump volume is within the first 2 GB boundary of the disk. A future version of Ignite-UX will likely add the ability to specify which swap volume is primary, in addition to the ability to specify swap priorities for each swap volume.
- If you set some of the "final" system parameters (also known as set\_parms information), but not all of them, your system will come up, but will not automatically run set\_parms and you will have to take explicit action to enter the new data.

The most common case is when you have entered the final host name and IP, but have not yet entered the time zone or root password.

Workarounds are as follows:

- \* make sure you enter all information at Ignite-UX time, or
- \* enter no information at Ignite-UX time (so set\_parms will run), or
- \* make the remaining changes manually after the system comes up by using the following:

```
/sbin/set_parms initial
```

- Ignite-UX does not handle large size quantities. For example, close to, equal to, or greater than 2 TiB ( $2^{31}$ ). In some cases, storage-related software may significantly further limit maximum sizes (failures for sizes greater than 1 TiB have been observed). This means that Ignite-UX can not install or recover content to or from disks, volumes, file systems or other storage units of larger sizes. In most cases these large disks will be hidden from Ignite-UX interfaces and will not be available for install. In some cases large disks may be listed but use may result in errors or failure. Recovery archives should not be created which contain data residing on large storage units listed above.

Note that Ignite-UX is not intended to be used instead of backup tools to save or restore large quantities of application data.

- When a golden image is created for an 11i v3 client using the pax format of the pax command, it is not possible to run archive\_impacts on it from the server if the server is not running at least 11i v3 because currently the 11i v3 version of the pax command is the only version that understands the pax format.

### 5.3 Networking Issues

=====

- Ignite-UX Hewlett-Packard network interface support matrix.

The only interfaces supported for performing a network boot from a server are the built-in ethernet (10-Base-T, 100-Base-T, and Gigabit) on all newer systems. The T, V, H, G, I, E class and 9000/8\*7S systems do not support network boot. Other network interfaces that are supported (see the table below) can only be used when the system is booted using the "bootsys" command or booted from an Ignite-UX tape or CD. See the bootsys(1M) and make\_boot\_tape(1M) manpages.

Type	driver	amount of support	Notes
10-base-T	lan2	full	1
10-base-T	lan3	full	1
100-base-T	btlan	full	1
100VG		none	
EISA FDDI	fddi0	full, 32-bit only	
HPPB FDDI	fddi	full	
HSC/GSC FDDI	fddi3	may work	2
PCI FDDI	fddi4	full	
EISA token	token	may work	2,3
HPPB token	token2	may work	2
PCI token	pcitr	may work	2
Gigabit	gelan	full	
Gigabit	igelan	full	

#### Notes:

- 1) These interfaces are known to work correctly with DHCP.
  - 2) The drivers for these interfaces are included in the INSTALL kernel, but have not been tested due to lack of appropriate hardware in the test lab. They are "not known not to work" at this point in time.
  - 3) The EISA token-ring driver has been reported to work with Ignite-UX; however the correct driver is not added to /stand/system automatically. See later in this section for a workaround using mod\_kernel.
- Ignite-UX attempts to use DHCP to get networking information at the beginning of the installation. It times out in 30 seconds if no DHCP server responds. If you do not want Ignite-UX to attempt to use DHCP, you can either:
- \* Turn off the use of DHCP in the "Advanced Options" menu accessible from the menu titled "Welcome to Ignite-UX" which is displayed on the target console, just after the boot process.
  - \* If you are using an Ignite-UX server, you can specify the configuration file keyword: "disable\_dhcp=true" in either:
    - o The INSTALLFS file via the instl\_adm command in which case DHCP will be disabled for the entirety of the installation.
    - o In a configuration file such as /var/opt/ignite/config.local. In this case, the initial Ignite-UX boot will attempt to use DHCP to get an address for use during the installation, but the final system will have DHCP disabled via the DHCP\_ENABLE variable in

/etc/rc.config.d/netconf.

- For environments where permanent IP address assignments are made ahead of time, they may be done in /etc/bootptab and thus satisfy the DHCP request a client will make in order to obtain networking information. See the appendix on configuring DHCP services in the Ignite-UX Administration Guide at:

<http://docs.hp.com/en/IUX/infolib.html>

This may have an undesirable side effect in that the client will continue to contact that BOOTP server each time it boots and will update any networking information that the server provides. The reason this is undesirable is that DNS information cannot be provided in bootptab, and thus the client will remove the DNS information from /etc/resolv.conf each time it boots.

This problem can be fixed by adding "disable\_dhcp=true" to /var/opt/ignite/config.local such that the client will use DHCP/BOOTP to get its initial networking information, but will end up not using DHCP for on-going IP address management.

- For NIO FDDI, the MTU size can now be specified by using the \_hp\_lanadmin\_args variable. See instl\_adm(4).
- Three special variables: \_hp\_nfs\_mount\_opts, \_hp\_nfs\_mount\_retries and \_hp\_tftp\_cmds can be used where special networks (like WAN) require tuning of the NFS and tftp services to increase performance or reliability. See instl\_adm(4).
- It is highly recommended that NFS over TCP be enabled on Ignite-UX servers. Problems have been seen when only NFS over UDP is enabled (which is the default). To determine whether NFS over TCP is enabled run the following command on your server:

```
# rpcinfo | grep nfs
100003 2  udp  0.0.0.0.8.1  nfs  superuser
100003 3  udp  0.0.0.0.8.1  nfs  superuser
100003 2  tcp  0.0.0.0.8.1  nfs  superuser
100003 3  tcp  0.0.0.0.8.1  nfs  superuser
```

If you see the last two lines, then NFS over TCP is enabled and nothing needs to be done. If not, then it needs to be enabled. To enable it, "loopback" must be resolvable to the IP address 127.0.0.1 and /etc/services must be accessible. In a standard installation of HP-UX, there is an entry for "loopback" found in /etc/hosts which looks like:

```
127.0.0.1  localhost  loopback
```

The default name service switch behavior for host name resolution does not look at /etc/hosts. It first tries DNS, and if it cannot resolve the host name, it quits. In the default case, when the nfs.server startup script is run, it will not enable NFS over TCP unless you are using DNS and your DNS includes data for "loopback". If you do not use DNS, or if you do and DNS does not include "loopback", then it is impossible to enable NFS over TCP unless you provide and/or modify an



/etc/nsswitch.conf file.

To enable NFS over TCP, you will either have to add "loopback" to your DNS database if that is your only option, or to configure an /etc/nsswitch.conf file so that the host name resolution via the name service switch will also search files (/etc/hosts). In addition, you have to make sure the name service switch service behavior for services also searches files (/etc/services). There are at least six name service switch template files provided in /etc. If you have an /etc/nsswitch.conf file already, you will need to change it to include a hosts and services file lookup. For example these lines could look like:

```
hosts:    dns [NOTFOUND=continue] files [NOTFOUND=return]
services: nis [NOTFOUND=continue] files
```

These entries will tell the name service switch for host name resolution to first try DNS as before, and if that fails, then continue on (instead of quitting) to look at /etc/hosts. Note that [NOTFOUND=continue] is the default behavior with /etc/nsswitch.conf usage, so an equivalent entry could just say "dns files". If resolving via files fails to find a name, then the name service switch would return a failure.

The name service switch behavior for services would (using the line above) use NIS first and fall back to files (/etc/services) if it cannot find the service name being searched for.

If there is no /etc/nsswitch.conf file, then the template /etc/nsswitch.hp\_defaults contains all the default name service switch behaviors of HP-UX. Assuming you want to preserve all other networking behaviors, this would be a good starting point. You would copy that file to /etc/nsswitch.conf, and then edit the hosts and services lines to look like the one above.

Once the changes are made, you will have to stop and restart the NFS server on your Ignite-UX server to enable NFS over TCP:

```
# /sbin/init.d/nfs.server stop
# /sbin/init.d/nfs.server start
```

Repeat running the rpcinfo command above. You should now see NFS over TCP enabled.

If your configurations use NFS to access archives on systems other than the Ignite-UX server, then those systems should have NFS over TCP enabled as well.

#### 5.4 User Interface Issues

=====

- The user interface does not currently allow you to directly specify kernel parameters. The target's kernel can be manipulated via the "mod\_kernel" configuration file keyword. See instl\_adm(4) for details. There is also a way to make kernel modifications user selectable in the UI by treating them as software.

- The DNS server in the "System" tab for setting up network information must be specified as an IP. It cannot be specified as a host name.
- The "Change Depot Location" menu on the "Software" tab has a selector called "Interactive swinstall". Setting this selector to "yes" means that an interactive swinstall (or swm if B.11.31 or later) session will be run on the target machine and must be controlled on the target console. It is not currently possible to control an interactive swinstall/swm session from the Ignite-UX server GUI.
- The help dialog for the configuration tabs has a "Print" button that is not functional when running on a client in terminal user interface (TUI) mode. Pressing the "Print" button on the help dialog while in the TUI will cause the user interface to fail, and the session will have to be restarted. It is not possible to print in TUI mode, because there are no printers set up.

## 5.5 Issues When Installing From Archives

=====

- When performing multiple, simultaneous archive installations from a single server (using the ftp archive access method), you may get some tftp errors. They will be displayed on the target console or in the log file at `/var/opt/ignite/clients/<LLA>/install.log` as: "tftp: rcvfile: rcvfrom: Can't assign requested address". A workaround is to use one of the other archive access methods; for example: nfs or remsh.
- There is currently no tool support for creating configuration files for archive software. Configuration file templates for this purpose are supplied in:  
  
`/opt/ignite/data/examples`
- If an archive is not accessible, Ignite-UX does not find out until it actually tries to extract the archive on the target machine. Even then, the error indicators are non-intuitive (usually get a message to load the next tape!). When this happens, check that:
  - \* the archive is named correctly in the configuration file,
  - \* the archive actually exists,
  - \* the archive is readable, and
  - \* the archive is accessible via the method you specified.

## 5.6 Common Problems Loading Patches

=====

- When setting up an SD depot containing patches, you need to ensure that all patches are compatible with the target systems on which you plan to install them.
- By default, Ignite-UX does not use the "`-xpatch_match_target=true`" option to swinstall; it calls out the software bundles explicitly. This causes selected patches to be loaded even when the software they patch is not loaded. Note that for 11.23 and later patch bundles, they are packaged in a way so that `make_config` will omit

the `sd_software_list` attribute which will result in those bundles being implicitly selected which avoids these problems.

To change the default behavior of Ignite-UX to use a `"-xpatch_match_target=true"` type `swinstall`, the `sd_command_line` keyword can be used to define this. For example:

```
sd_command_line += " -xpatch_match_target=true "
```

This keyword can be either global or set inside a `sw_source`. See `instl_adm(4)` for more information. If you wish to implicitly select patch bundles, then the `sd_software_list` keyword for the patch bundle `sw_sel` must not be present.

- Patches should be loaded after the software they are patching. To ensure that this is the case, use the `load_order` attribute in the `sw_source` for the patch depot. The default `load_order` is zero (0) for core software and five (5) for applications. Make the `load_order` greater than five (5) for a patch depot to force it to be installed last.

## 5.7 `make_[tape|net]_recovery` Issues

=====

- There are some special issues when using Ignite-UX in a mirror disk environment. See the white paper at:

<http://docs.hp.com/en/IUX/infolib.html>

- When a system has a DCE/DFS file system, the system recovery archive will not include aggregate file systems which have been created. These file systems must be manually restored.
- When `make_net_recovery` runs, it checks to make sure there is enough disk space available for the archive being created. However, if multiple `make_net_recovery` sessions are creating archives on the same server at the same time, it is possible to run out of disk space.
- When the client machine is on a different network domain than the Ignite-UX server, the recovery GUI may have difficulty finding the client. This problem can be remedied by making sure that both the client and server have DNS search strings for both of the domains.
- `make_net_recovery` has not been tested in ServiceGuard environments.
- When `make_net_recovery` archives a system that contains direct automounts, it can produce the error:

```
pax: dcatmp : Permission denied
dcatmp> 2 GB. Not Dumped.
```

The automount is (correctly) not archived, and the error can be safely ignored.

- Both `make_net_recovery` and `make_tape_recovery` may result in a warning message regarding temporary files that pax was not able to put into the archive, such as:

\* Archiving contents of XX via tar image to local device/dev/rmt/0mn.  
pax: var/stm/logs/tools/10\_0\_15\_0\_6/id : No such file or directory  
WARNING: The pax command returned a non-zero exit status  
(exit status 1)

This is because there is a window of opportunity when Ignite-UX checks to see if a file still exists and when pax attempts to place the file into the archive. It is uncommon but still possible to see these messages.

- Due to changes in the essential files processing in list\_expander, directory structures may be only partially included in the recovery archive. This may occur under some circumstances when either the -A or -x inc\_entire options are used with symlinks in essential directories pointing to files outside of the essential directories. This problem is expected to be addressed in a future release of Ignite-UX.
- make\_tape\_recovery is the same code as make\_net\_recovery, thus most of the known issues apply to both commands.
- make\_tape\_recovery does not support spanning multiple tapes when it is run remotely from the Ignite GUI on the server or locally on the client via cron. When a large archive must span multiple tapes, the user must run make\_tape\_recovery interactively on the client.

## 5.8 Log File Issues

=====

- The Ignite-UX log files found in

`/var/opt/ignite/logs`

on the Ignite-UX server do not automatically get truncated. If you have a lot of server activity, these files may become very large. They can be safely truncated as you see fit.

## 5.9 Security Issues

=====

By default, an Ignite-UX server exports the directory

`/var/opt/ignite/clients`

to every system. This is done so that any Ignite-UX client can use this server without any prior action being performed on the server. If exporting this directory to all systems is a concern, you may choose to export this directory only to your clients, by changing the

`/var/opt/ignite/clients -anon=2`

in the

`/etc/exports`

file to be similar to the line below (but with client1, client2, etc., replaced with your Ignite-UX client host names, or the host names that

they use when performing the installations if they are not the same):

```
/var/opt/ignite/clients -anon=2,access=client1:client:client3
```

You will need to execute "exportfs -a" after changing /etc/exports for the change to take effect.

The following HP Security Bulletins pertain to Ignite-UX:  
(see <http://www.itrc.hp.com/service/cki/secBullArchive.do>)

- HPSBUX01219
- HPSBUX02157
- HPSBUX02249

#### 5.10 Cluster File System (CFS) Issue

=====

Ignite-UX has not been verified to work with Cluster File System (CFS). To avoid potential problems, do not include CFS volumes in Ignite-UX recovery images. The presence of CFS on a system can cause issues for Ignite-UX. If you encounter any issues, please report them through your normal support channel. HP will treat issues related to running Ignite-UX on systems with CFS as enhancement requests, not defects, until after Ignite-UX has been tested with CFS and the combination becomes fully supported.

#### 5.11 September 2004 or earlier Itanium Based VxVM Golden Image Load Failure

=====

==

Due to a change in a device major number in VxVM, golden images created on Itanium-based systems running VxVM and any HP-UX release prior to and including the September 2004 release, cannot be installed without manual intervention with Ignite-UX releases C.6.2 through C.6.10. It is recommended that you update any golden images that fit the described criteria to new releases of 11i v2 (B.11.23). If this issue is encountered, reboot the system and allow Ignite-UX to complete the installation. The system will come up into a usable state.

#### 5.12 Memory File System (MemFS) Issue

=====

Ignite-UX with the C.7.2 version does support recovery of Memory File System (MemFS) file systems. It does not currently support MemFS during cold-install. The MemFS file system content will not be preserved of course, but the file systems themselves will be.

#### 5.13 Encrypted Volume and File System (EVFS) Issue

=====

Ignite-UX does not currently support Encrypted Volume and File System (EVFS). This means that EVFS volumes can not be configured during cold-install and will not be preserved when using `make_net_recovery` or `make_tape_recovery`. Please consult EVFS product documentation for information on configuring and backing up EVFS volumes. Support for EVFS is planned for a future release. Please check future Ignite-UX release notes for more information; they will be updated to indicate

when EVFS support has been added and will detail any limitations.

#### 5.14 Disk space issues using VxVM & hard drive models ST318203[FL]C

=====

VxVM disk groups containing Seagate hard drive models ST318203[FL]C cannot create volumes mapped to a single drive that 100% allocates that individual hard drive. The error message will be similar to:

```
ERROR: CREATE_VOLUME: Not enough space on disk "c3t5d0" for volume "myvol".
ERROR: CREATE_VOLUME: Need 13258328 K, 13257184 k available.
```

The workaround is change the allocation of the volume causing the error to 'Fixed MB' and decrease the allocation by the difference between the 'Need' & 'available' amounts reported in the error.

#### 5.15 VxVM Used for OS Content with Non-VxVM Root Volume Install

=====

If VxVM is not used for the root volume but other HP-UX OS content is installed to a VxVM volume, the system may fail to correctly install and boot. An example of such a configuration would be VxVM used for /opt or /usr and another volume manager used for the root volume. While Ignite-UX can support this type of configuration, the resulting system may not operate correctly. During system boot vxconfigd may not be started early enough and some VxVM OS content may not be mounted as needed.

We recommend that only one volume manager type be used for all HP-UX OS content being installed. Different volume manager types may be used for HP-UX OS content and application data.

#### 5.16 Support issue for B.11.11 installs

=====

When B.11.11 is being installed using Ignite-UX version C.7.1 or later, the patch PHSS\_22898 or a successor must be installed as part of the process. If the patch is not installed, and an archive is installed after the HP-UX B.11.11 core operating system but before PHSS\_22898 is loaded, you will see the following messages on the console for each archive load:

```
/usr/lib/dld.sl: Unresolved symbol:
do_out__Q2_
3std14codecvt_bynameXTwTcT9mbstate_t_CFR9mbstate_tPCwT2RPCwPcT5RPc
(code) from /monitor_bpr
/usr/lib/dld.sl: Unresolved symbol:
do_in__Q2_3std14codecvt_bynameXTwTcT9mbstate_t_CFR9mbstate_tPCcT2RPCcPwT5RPw
(code) from /monitor_bpr
pax_iux:/tmp/ign_configure/archive_script[2]: 5308 Abort(coredump)
```

The archive will not be loaded successfully. You cannot load an archive when installing HP-UX B.11.11 from a Software Distributor depot until after PHSS\_22898 or successor has been installed. If you encounter this problem you must use the load\_order statement to move the archive loads to somewhere after PHSS\_22898 has been loaded. See instl\_adm(4) for more information about the load\_order keyword.

Furthermore, even if the above messages are not displayed, it may be possible that the following message appears when the process reboots after the kernel build:

```
/usr/lib/dld.sl: Unresolved symbol:  
id__Q2_3std7codecvtXTcTcT9mbstate_t_ (data) from /configure3  
/sbin/bcheckrc:
```

In this case, PHSS\_22898 or successor must be included in the installation, but the load order is not important.

There is no workaround.

## 6. Compatibility and Installation Requirements

=====

### 6.1 Software Requirements

=====

- Ignite-UX C.\* can be installed on any HP-UX system running B.11.11, B.11.23, or B.11.31 when downloaded from the Web. If installed from Application Media, it can only be installed on the same release of HP-UX that the Application Media is targeted at (i.e. Ignite-UX from the B.11.23 Application Media can only be installed on B.11.23).

### 6.2 Hardware Support Matrix

=====

- For current information on both supported and unsupported hardware for B.11.23, see the HP-UX 11i v2 Installation and Update Guide at:

<http://docs.hp.com/hpux/onlinedocs/5990-6728/>

### 6.3 VxVM and VxFS Support

=====

This section describes which versions of VxVM and VxFS are supported by Ignite-UX versions for each HP-UX release. Ignite-UX provides install and recovery support for the VxVM and VxFS versions listed in this table unless otherwise noted.

Client OS	Ignite Version	VxVM/VxFS Versions Supported
B.11.31	C.7.0 and greater	4.1, 3.5
B.11.23	C.6.9 and greater	5.0*, 4.1, 3.5
B.11.23	C.6.4 - C.6.8	4.1, 3.5
B.11.23	B.5.0 - C.6.3	3.5

\* Note: Cold install of VxVM 5.0 is not supported.

B.11.11      B.5.0 and greater      3.5

### 6.4 LVM 2.0 Support

=====

Ignite-UX does not currently support the installation or recovery of LVM 2.0 volumes. If a system to be recovered has LVM 2.0 volumes, these volumes will be imported during the install of recovery images provided they are excluded from the archive when it is initially created.

## 6.5 Tape Device Support

=====

Starting with version C.6.8 recovery and custom boot tapes created with Ignite-UX may be used for direct tape boot with Hewlett-Packard Itanium-based systems.

In order to use direct boot from tape, you will need an Itanium-based system or firmware upgrade which supports direct tape boot. Direct tape boot may not be supported with some I/O interfaces. Some Itanium-based systems may never have firmware support for direct tape boot.

Support for the two-step media recovery process continues. Use of the two-step media recovery process requires use of HP-UX installation or custom boot media containing matching Ignite-UX version boot content. For more information on this process, see the section on tape recovery with no tape boot support in the Ignite-UX Administration Guide at:

<http://docs.hp.com/en/IUX/infolib.html>

## 7. Native Language Support

=====

### 7.1 Localization

=====

The Ignite-UX product has Japanese EUC and Japanese SJIS localized manpages and online help.

The Japanese localized release notes are only provided on the Web so that translated information may be kept consistent with released product information.

The English version of this document posted to the Web may also contain more current information than the version included in the product.

For the most current information, go to:

<http://www.docs.hp.com/en/IUX/infolib.html>

### 7.2 Multi-Byte Character Support

=====

The Ignite-UX product does not support multi-byte characters in file names.