

HP aC++ and U.S. Daylight Saving Time (DST) date changes

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DESCRIPTION

Beginning 11 March 2007, Daylight Saving Time (DST) start and end dates for the United States will transition to comply with the Energy Policy Act of 2005. Because of this change, patches will be required for the aC++ runtime libraries. The compiler itself is not impacted by this change.

Several countries besides the United States of America are also implementing the same DST change (Canada, Bermuda), and other countries are expected to make similar changes. For a complete listing of the World Wide Daylight Saving time schedule and which countries are changing DST schedules along with the US, refer to <http://webexhibits.org/daylightsaving/g.html>.

This document outlines patches needed for the HP aC++ products. Information on the US 2007 Daylight Saving Time changes for other HP products can be found at <http://www.hp.com/go/dst>.

HP aC++ IMPACT

The latest patches for the aC++ runtime libraries have fixes necessary to accommodate the changes in the DST changes. If your application makes use of the RWZone or the RWTime classes from the librtool library, you are impacted. This applies to both -AA and -AP on all HP-UX platforms. Specific to the HP9000, if your application makes use of the Standard Components Time and Place classes from the lib++.a library, you are impacted as well.

The HP aC++ libraries are available as shared and archive libraries. By default, linking is done using the shared libraries. If the application is linked shared, you can just apply the aC++ runtime patch and retest your application. The runtime patch must be installed on every deployment machine. If the application is linked archived against either lib++.a or librtool.a, the patches must first be applied and then the application relinked. The resulting application must then be redeployed on all of the deployment machines.

There are tools that may help determine your situation:

nm – Used to list function references and definitions that occur within a program. Programs that have been ‘stripped’ will not have a symbol table in the program, and other means (such as source code investigation) will need to be used for this analysis.

grep – Used to search the list of names for those functions that are impacted by the change. All symbol names generated for these affected interfaces include 6RWTime, 6RWZone, 4Time, or 5Place. The leading digit is part of the mangled name and is used to reduce false positives. In general, if you discover the definition of such functions, you have linked against the archive library and will need to relink. If you discover only references, you have linked against the shared library.

chatr - Used to determine what shared libraries a program has been linked against. Finding either librtool or librtool_v2 libraries in the list indicates that you should install the aC++ runtime patch on the machines that run those programs. Programs using the shared library form need not be relinked, but the application will need to be restarted.

HP aC++ LIBRARY PATCHES

The library changes necessary for lib++.a are fixed in the A.03.70 release (11.11). For older versions and for 11.0 SR, patches for lib++.a can be downloaded as follows:

- hostname : sgpue031.sg.external.hp.com
- username : testuser
- password : 8T)U(serpwd
- file : LIB++_patches/PHSS_35968.depot (11.00 & 11.11)
installable on aC++ version A.03.30 and higher
- : LIB++_patches/PHSS_35985.depot (11.23)
installable on aC++ version A.03.60 and higher

For the aC++ librwtol library changes, the following or later patches should be installed:

| OS Version | HP aC++ runtime libraries Patch ID | Other patches |
|------------|--|---|
| 11.00 | PHSS_33941 (superseded by PHSS_33943) | PHSS_35380 11.00 ld(1) and linker tools cumulative patch |
| 11i v1 | PHSS_33942 (superseded by PHSS_33944) | PHSS_35381 11.11 ld(1) and linker tools cumulative patch |
| 11i v2 | PHSS_34041 (superseded by PHSS_35055) | None |
| 11i v3 | No patch needed | None |

IMPACT TO OTHER NORTH AMERICAN COUNTRIES

The interfaces of RWZone, RWTime, Time, and Place make the assumption that all of the countries in North America have consistent DST rules. This is by design and has always been documented to that affect.

Customers residing in a North American country whose DST rules are not consistent with the United States should consider not installing the DST patches or by using the following workaround.

A useable solution is to apply the patches and reset the TZ variable four times a year:

```
Starting on Jan 01: TZ=PST8PDT
On Mar 11, do:    TZ=PST8
On Apr 01, do:   TZ=PST8PDT
On Oct 28, do:   TZ=PST8
On Nov 04, do:   TZ=PST8PDT
```

These dates would change for every year. Note that this would give the wrong time if the question "What time is it?" in the past or future is used. So asking questions about time that spans the gap between these four regions would give wrong answers. But they would give the correct time for "now". All affected applications should be restarted on each of the changes above.

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Hardware Platforms Affected: HP 9000 and Integrity Servers

Components Affected: N/A

Operating Systems Affected: HP-UX

Software Affected:

Third Party Products Affected:

Support Communication Cross Reference ID:

REVISION HISTORY

| Document Version | Release Date | Details |
|------------------|--------------|---|
| 1 | 2/16/2007 | Original document release |
| 2 | 2/23/2007 | Revised with aC++ librwtool library table additions |
| 3 | 2/28/2007 | Added linker patch PHSS_35380 for 11.00 |

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