z/OS 3.1 IBM Education Assistant

Solution Name: LE aligned memory allocation support

Solution Element(s): Language Environment

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Agenda

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Trademarks

- See url http://www.ibm.com/legal/copytrade.shtml for a list of trademarks.
- Additional Trademarks:
  - None

Objectives

- Describe the Language Environment aligned memory allocation support for z/OS 3.1.

Overview

- Who

  As an application programmer, I want aligned_alloc() and posix_memalign() support available, so I can develop/port standardized and modernized application more easily.

- What
  - This is phase II of aligned memory allocation support (phase I delivered in V2.5)
  - Enhancement for aligned_alloc() to remove alignment restrictions
  - new API posix_memalign() support
- Wow
  - Application programmers can develop/port standardized and modernized application more easily by invoking aligned_alloc() and posix_memalign()

Usage & Invocation

- **Format**

```
#include <stdlib.h>
void *aligned_alloc(size_t alignment, size_t size);


#define _UNIX03_SOURCE
#include <stdlib.h>
int posix_memalign(void **memptr, size_t alignment, size_t size);
```

- **General Description**

  The aligned_alloc() and posix_memalign() functions allocate space for an object whose alignment is specified by alignment, whose size is specified by size.

Interactions & Dependencies

- Software Dependencies
  - None
- Hardware Dependencies
  - None
- Exploiters
  - Open XL C/C++ compiler
  - JVM

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: No
- No upgrade/coexistence concerns
- No toleration/coexistence APARs/PTFs

Installation & Configuration

- No unique considerations

Summary

- LE aligned memory allocation functions, aligned_alloc() and posix_memalign() are fully supported.

Appendix

- z/OS XL C/C++ Runtime Library Reference