z/OS V1R13

Metal C runtime library: qsort()

Overview

- qsort() is an array sorting function that is part of many C standard libraries.
- Problem Statement / Need Addressed
  - Metal C users requested that qsort() be added to the Metal C Runtime Library so that it could be used within their applications.
- Solution
  - Add qsort() to the Metal C Runtime Library.
    - Support for both ILP32- and LP64-compiled program
- Benefit / Value
  - Metal C applications can now call the Runtime to sort arrays

Usage and invocation

#include <stdlib.h>

```
void qsort(void *base, size_t num, size_t width,
        int(*compare)(const void *element1, const void *element2));
```

- base: address of first element of the array
- Num: number of elements in the array
- Width: size of each element
- compare: function that compares two elements in the array. Returns:
  - <0: element1 is less than element2
  - =0: element1 is equal to element2
  - >0: element1 is greater than element2

Interactions and dependencies

- Software dependencies
  - z/OS XL C/C++ compiler
- Hardware dependencies
  - None
- Exploiters
  - None

Migration and coexistence considerations

- None

Installation

- None

Appendix - References

- Metal C Programming Guide and Reference - SA23-2225