int i = 1;

float f = 1.5;

int\* p = &i;

int s[] = {-1, 0, 1};

|  |  |  |  |
| --- | --- | --- | --- |
| . . . | | | |
| .bss | 0x2\_0017 | 00 | i |
| 0x2\_0016 | 00 |
| 0x2\_0015 | 00 |
| 0x2\_0014 | 00 |
| .data | 0x2\_0013 | 00 | s[2] |
| 0x2\_0012 | 00 |
| 0x2\_0011 | 00 |
| 0x2\_0010 | 01 |
| 0x2\_000f | 00 | s[1] |
| 0x2\_000e | 00 |
| 0x2\_000d | 00 |
| 0x2\_000c | 00 |
| 0x2\_000b | ff | s[0] |
| 0x2\_000a | ff |
| 0x2\_0009 | ff |
| 0x2\_0008 | ff |
| 0x2\_0007 | 00 | p |
| 0x2\_0006 | 02 |
| 0x2\_0005 | 00 |
| 0x2\_0004 | 14 |
| 0x2\_0003 | 3f | f |
| 0x2\_0002 | c0 |
| 0x2\_0001 | 00 |
| 0x2\_0000 | 00 |
| . . . | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Size (bytes) | Address | Alignment | Content |
| i | 4 | 0x2\_0014 | aligned | 00 00 00 01 |
| f | 4 | 0x2\_0000 | aligned | 3f c0 00 00 |
| p | 4 | 0x2\_0004 | aligned | 00 02 00 14 |
| s | 12 |  |  |  |
| s[0] | 4 | 0x2\_0008 | aligned | ff ff ff ff |
| s[1] | 4 | 0x2\_000c | aligned | 00 00 00 00 |
| s[2] | 4 | 0x2\_0010 | aligned | 00 00 00 01 |

int a = 23;

long long b = 23;

char c;

int s[5] = {1, 4, 8};

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| .bss | 0xb\_0020 | 00 | c |
| .data | 0xb\_001f | 00 | s[4] |
| 0xb\_001e | 00 |
| 0xb\_001d | 00 |
| 0xb\_001c | 00 |
| 0xb\_001b | 00 | s[3] |
| 0xb\_001a | 00 |
| 0xb\_0019 | 00 |
| 0xb\_0018 | 00 |
| 0xb\_0017 | 08 | s[2] |
| 0xb\_0016 | 00 |
| 0xb\_0015 | 00 |
| 0xb\_0014 | 00 |
| 0xb\_0013 | 04 | s[1] |
| 0xb\_0012 | 00 |
| 0xb\_0011 | 00 |
| 0xb\_0010 | 00 |
| 0xb\_000f | 01 | s[0] |
| 0xb\_000e | 00 |
| 0xb\_000d | 00 |
| 0xb\_000c | 00 |
| 0xb\_000b | 17 | b |
| 0xb\_000a | 00 |
| 0xb\_0009 | 00 |
| 0xb\_0008 | 00 |
| 0xb\_0007 | 00 |
| 0xb\_0006 | 00 |
| 0xb\_0005 | 00 |
| 0xb\_0004 | 00 |
| 0xb\_0003 | 17 | a |
| 0xb\_0002 | 00 |
| 0xb\_0001 | 00 |
| 0xb\_0000 | 00 |
| . . . | | | |

int \*a;

long long b = 23;

wchar c;

int s[5] = {1, 4, 8};

|  |  |  |  |
| --- | --- | --- | --- |
| . . . | | | |
| .stack | 0xf\_1fff | ?? | a |
| 0xf\_1ffe | ?? |
| 0xf\_1ffd | ?? |
| 0xf\_1ffc | ?? |
| 0xf\_1ffb | 00 | b |
| 0xf\_1ffa | 00 |
| 0xf\_1ff9 | 00 |
| 0xf\_1ff8 | 00 |
| 0xf\_1ff7 | 00 |
| 0xf\_1ff6 | 00 |
| 0xf\_1ff5 | 00 |
| 0xf\_1ff4 | 17 |
| 0xf\_1ff3 | ?? | c |
| 0xf\_1ff2 | ?? |
| 0xf\_1ff1 | 00 | s[4] |
| 0xf\_1ff0 | 00 |
| 0xf\_1fef | 00 |
| 0xf\_1fee | 00 |
| 0xf\_1fed | 00 | s[3] |
| 0xf\_1fec | 00 |
| 0xf\_1feb | 00 |
| 0xf\_1fea | 00 |
| 0xf\_1fe9 | 00 | s[2] |
| 0xf\_1fe8 | 00 |
| 0xf\_1fe7 | 00 |
| 0xf\_1fe6 | 08 |
| 0xf\_1fe5 | 00 | s[1] |
| 0xf\_1fe4 | 00 |
| 0xf\_1fe3 | 00 |
| 0xf\_1fe2 | 04 |
| 0xf\_1fe1 | 00 | s[0] |
| 0xf\_1fe0 | 00 |
| 0xf\_1fef | 00 |
| 0xf\_1fee | 01 |
| . . . | | | |

a dw 256

c db ‘0’

s dw 1,2,3

|  |  |  |  |
| --- | --- | --- | --- |
| . . . | | | |
| .data | 0x2008 | 00 | s[2] |
| 0x2007 | 03 |
| 0x2006 | 00 | s[1] |
| 0x2005 | 02 |
| 0x2004 | 00 | s[0] |
| 0x2003 | 01 |
| 0x2002 | 30 | c |
| 0x2001 | 01 | a |
| 0x2000 | 00 |
| . . . | | | |

int a = 256;

char c = ‘0’;

int s[3] = {1, 2, 3};

|  |  |  |  |
| --- | --- | --- | --- |
| . . . | | | |
| .stack | 0x4401 | 01 | a |
| 0x4400 | 00 |
| 0x43ff | 30 | c |
| 0x43fe | ?? |  |
| 0x43fd | 00 | s[2] |
| 0x43fc | 03 |
| 0x43fb | 00 | s[1] |
| 0x43fa | 02 |
| 0x43f9 | 00 | s[0] |
| 0x43f8 | 01 |
| . . . | | | |