

1. Here is the experimental prototype of the Van unit test system.

⟨Header files 3⟩

⟨The main program 7⟩

2. License

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Van unit test system.

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3. We include declarations from Van OS - os.h - and Unix. Below there is some evidence, why we need these interfaces with justification.

⟨Header files 3⟩ ≡

```
#include "os.h"
```

```
#include <stddef.h>
```

```
#include <stdbool.h>
```

```
#include <errno.h>
```

```
#include <limits.h>
```

This code is used in section 1.

4. Header file grounds:

os.h	Van Operating system: printf().
stddef.h	Standard type definitions: offsetof().
stdbool.h	C99 allows bool. true is 1 and false is 0.
errno.h	OS interface errors like ENOMEM=12 or EFAULT=14.
limits.h	Sizes of integral or integer types: INT_MIN.

5. Constants Definitions.

```
#define P "U>"
#define POISON_POINTER_DELTA 0
#define LIST_POISON1 ((void *) #100 + POISON_POINTER_DELTA)
#define LIST_POISON2 ((void *) #200 + POISON_POINTER_DELTA)
#define __noreturn __attribute__((__noreturn__))
#define __must_check __attribute__((__warn_unused_result__))
#define REFCOUNT_SATURATED (INT_MIN/2)
#define KUNIT_LOG_SIZE 512
#define KUNIT_STATUS_COMMENT_SIZE 256
#define KUNIT_PARAM_DESC_SIZE 128
#define KUNIT_SUBTEST_INDENT "    "
#define KUNIT_SUBSUBTEST_INDENT "        "
#define KUNIT_CURRENT_LOC { .file = __FILE__ , .line = __LINE__ }
```

6. Constants Explanations.

P:

Van unit prompt.

POISON_POINTER_DELTA:

Architectures might want to move the poison pointer offset into some well-recognized area such as 0xdead000000000000, that is also not mappable by user-space exploits.

LIST_POISON1:

LIST_POISON2:

These are non-NULL pointers that will result in page faults under normal circumstances, used to verify that nobody uses non-initialized list entries.

7. Now we come to the layout of the *main* function.

⟨The main program 7⟩ ≡

```
void main(void)
{
    printf("Hello.\n");
}
```

This code is used in section 1.

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⟨Header files 3⟩ Used in section 1.

⟨The main program 7⟩ Used in section 1.

VU-MAIN

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