



# Open Source Used In IOSXE DPKK 18.05

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## 1.1 DPDK-18.05 18.05

### 1.1.1 Available under license

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### 1.1.1 Available under license :

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/\*-

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\*/

```
#include <stdio.h>
#include <string.h>
#include <stdint.h>
#include <sys/queue.h>

#include <rte_cfgfile.h>

#include "test.h"
#include "resource.h"

#define CFG_FILES_ETC "test_cfgfiles/etc"

REGISTER_LINKED_RESOURCE(test_cfgfiles);

static int
test_cfgfile_setup(void)
{
    const struct resource *r;
    int ret;

    r = resource_find("test_cfgfiles");
    TEST_ASSERT_NOT_NULL(r, "missing resource test_cfgfiles");

    ret = resource_untar(r);
    TEST_ASSERT_SUCCESS(ret, "failed to untar %s", r->name);

    return 0;
}

static int
test_cfgfile_cleanup(void)
{
    const struct resource *r;
    int ret;

    r = resource_find("test_cfgfiles");
    TEST_ASSERT_NOT_NULL(r, "missing resource test_cfgfiles");

    ret = resource_rm_by_tar(r);
    TEST_ASSERT_SUCCESS(ret, "Failed to delete resource %s", r->name);
}
```

```

return 0;
}

static int
_test_cfgfile_sample(struct rte_cfgfile *cfgfile)
{
const char *value;
int ret;

ret = rte_cfgfile_num_sections(cfgfile, NULL, 0);
TEST_ASSERT(ret == 2, "Unexpected number of sections: %d", ret);

ret = rte_cfgfile_has_section(cfgfile, "section1");
TEST_ASSERT(ret, "section1 section missing");

ret = rte_cfgfile_section_num_entries(cfgfile, "section1");
TEST_ASSERT(ret == 1, "section1 unexpected number of entries: %d", ret);

value = rte_cfgfile_get_entry(cfgfile, "section1", "key1");
TEST_ASSERT(strcmp("value1", value) == 0,
    "key1 unexpected value: %s", value);

ret = rte_cfgfile_has_section(cfgfile, "section2");
TEST_ASSERT(ret, "section2 section missing");

ret = rte_cfgfile_section_num_entries(cfgfile, "section2");
TEST_ASSERT(ret == 2, "section2 unexpected number of entries: %d", ret);

value = rte_cfgfile_get_entry(cfgfile, "section2", "key2");
TEST_ASSERT(strcmp("value2", value) == 0,
    "key2 unexpected value: %s", value);

value = rte_cfgfile_get_entry(cfgfile, "section2", "key3");
TEST_ASSERT(strcmp("value3", value) == 0,
    "key3 unexpected value: %s", value);

return 0;
}

static int
test_cfgfile_sample1(void)
{
struct rte_cfgfile *cfgfile;
int ret;

cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/sample1.ini", 0);
TEST_ASSERT_NOT_NULL(cfgfile, "Failed to load config file");

```



```

ret = _test_cfgfile_sample(cfgfile);
TEST_ASSERT_SUCCESS(ret, "Failed to validate sample file: %d", ret);

ret = rte_cfgfile_close(cfgfile);
TEST_ASSERT_SUCCESS(ret, "Failed to close cfgfile");

return 0;
}

static int
test_cfgfile_sample2(void)
{
    struct rte_cfgfile_parameters params;
    struct rte_cfgfile *cfgfile;
    int ret;

    /* override comment character */
    memset(&params, 0, sizeof(params));
    params.comment_character = '#';

    cfgfile = rte_cfgfile_load_with_params(CFG_FILES_ETC "/sample2.ini", 0,
        &params);
    TEST_ASSERT_NOT_NULL(cfgfile, "Failed to parse sample2.ini");

    ret = _test_cfgfile_sample(cfgfile);
    TEST_ASSERT_SUCCESS(ret, "Failed to validate sample file: %d", ret);

    ret = rte_cfgfile_close(cfgfile);
    TEST_ASSERT_SUCCESS(ret, "Failed to close cfgfile");

    return 0;
}

static int
test_cfgfile_realloc_sections(void)
{
    struct rte_cfgfile *cfgfile;
    int ret;
    const char *value;

    cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/realloc_sections.ini", 0);
    TEST_ASSERT_NOT_NULL(cfgfile, "Failed to load config file");

    ret = rte_cfgfile_num_sections(cfgfile, NULL, 0);
    TEST_ASSERT(ret == 9, "Unexpected number of sections: %d", ret);

    ret = rte_cfgfile_has_section(cfgfile, "section9");

```

```

TEST_ASSERT(ret, "section9 missing");

ret = rte_cfgfile_section_num_entries(cfgfile, "section3");
TEST_ASSERT(ret == 21,
    "section3 unexpected number of entries: %d", ret);

ret = rte_cfgfile_section_num_entries(cfgfile, "section9");
TEST_ASSERT(ret == 8, "section9 unexpected number of entries: %d", ret);

value = rte_cfgfile_get_entry(cfgfile, "section9", "key8");
TEST_ASSERT(strcmp("value8_section9", value) == 0,
    "key unexpected value: %s", value);

ret = rte_cfgfile_save(cfgfile, "/tmp/cfgfile_save.ini");
TEST_ASSERT_SUCCESS(ret, "Failed to save *.ini file");
remove("/tmp/cfgfile_save.ini");

ret = rte_cfgfile_close(cfgfile);
TEST_ASSERT_SUCCESS(ret, "Failed to close cfgfile");

return 0;
}

static int
test_cfgfile_invalid_section_header(void)
{
    struct rte_cfgfile *cfgfile;

    cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/invalid_section.ini", 0);
    TEST_ASSERT_NULL(cfgfile, "Expected failed did not occur");

    return 0;
}

static int
test_cfgfile_invalid_comment(void)
{
    struct rte_cfgfile_parameters params;
    struct rte_cfgfile *cfgfile;

    /* override comment character with an invalid one */
    memset(&params, 0, sizeof(params));
    params.comment_character = '$';

    cfgfile = rte_cfgfile_load_with_params(CFG_FILES_ETC "/sample2.ini", 0,
        &params);
    TEST_ASSERT_NULL(cfgfile, "Expected failed did not occur");

```

```

return 0;
}

static int
test_cfgfile_invalid_key_value_pair(void)
{
    struct rte_cfgfile *cfgfile;

    cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/empty_key_value.ini", 0);
    TEST_ASSERT_NULL(cfgfile, "Expected failed did not occur");

    return 0;
}

static int
test_cfgfile_empty_key_value_pair(void)
{
    struct rte_cfgfile *cfgfile;
    const char *value;
    int ret;

    cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/empty_key_value.ini",
        CFG_FLAG_EMPTY_VALUES);
    TEST_ASSERT_NOT_NULL(cfgfile, "Failed to parse empty_key_value.ini");

    ret = rte_cfgfile_num_sections(cfgfile, NULL, 0);
    TEST_ASSERT(ret == 1, "Unexpected number of sections: %d", ret);

    ret = rte_cfgfile_has_section(cfgfile, "section1");
    TEST_ASSERT(ret, "section1 missing");

    ret = rte_cfgfile_section_num_entries(cfgfile, "section1");
    TEST_ASSERT(ret == 1, "section1 unexpected number of entries: %d", ret);

    value = rte_cfgfile_get_entry(cfgfile, "section1", "key");
    TEST_ASSERT(strlen(value) == 0, "key unexpected value: %s", value);

    ret = rte_cfgfile_close(cfgfile);
    TEST_ASSERT_SUCCESS(ret, "Failed to close cfgfile");

    return 0;
}

static int
test_cfgfile_missing_section(void)
{
    struct rte_cfgfile *cfgfile;

```

```

cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/missing_section.ini", 0);
TEST_ASSERT_NULL(cfgfile, "Expected failed did not occur");

return 0;
}

static int
test_cfgfile_global_properties(void)
{
    struct rte_cfgfile *cfgfile;
    const char *value;
    int ret;

    cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/missing_section.ini",
        CFG_FLAG_GLOBAL_SECTION);
    TEST_ASSERT_NOT_NULL(cfgfile, "Failed to load config file");

    ret = rte_cfgfile_num_sections(cfgfile, NULL, 0);
    TEST_ASSERT(ret == 1, "Unexpected number of sections: %d", ret);

    ret = rte_cfgfile_has_section(cfgfile, "GLOBAL");
    TEST_ASSERT(ret, "global section missing");

    ret = rte_cfgfile_section_num_entries(cfgfile, "GLOBAL");
    TEST_ASSERT(ret == 1, "GLOBAL unexpected number of entries: %d", ret);

    value = rte_cfgfile_get_entry(cfgfile, "GLOBAL", "key");
    TEST_ASSERT(strcmp("value", value) == 0,
        "key unexpected value: %s", value);

    ret = rte_cfgfile_close(cfgfile);
    TEST_ASSERT_SUCCESS(ret, "Failed to close cfgfile");

    return 0;
}

static int
test_cfgfile_empty_file(void)
{
    struct rte_cfgfile *cfgfile;
    int ret;

    cfgfile = rte_cfgfile_load(CFG_FILES_ETC "/empty.ini", 0);
    TEST_ASSERT_NOT_NULL(cfgfile, "Failed to load config file");

    ret = rte_cfgfile_num_sections(cfgfile, NULL, 0);
    TEST_ASSERT(ret == 0, "Unexpected number of sections: %d", ret);

```

```
ret = rte_cfgfile_close(cfgfile);
TEST_ASSERT_SUCCESS(ret, "Failed to close cfgfile");

return 0;
}

static int
test_cfgfile(void)
{
if (test_cfgfile_setup())
return -1;

if (test_cfgfile_sample1())
return -1;

if (test_cfgfile_sample2())
return -1;

if (test_cfgfile_realloc_sections())
return -1;

if (test_cfgfile_invalid_section_header())
return -1;

if (test_cfgfile_invalid_comment())
return -1;

if (test_cfgfile_invalid_key_value_pair())
return -1;

if (test_cfgfile_empty_key_value_pair())
return -1;

if (test_cfgfile_missing_section())
return -1;

if (test_cfgfile_global_properties())
return -1;

if (test_cfgfile_empty_file())
return -1;

if (test_cfgfile_cleanup())
return -1;

return 0;
}
```

```
REGISTER_TEST_COMMAND(cfgfile_autotest, test_cfgfile);  
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```

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