

MCR10125

# Remove mca\_priv\_\$force\_unlock entry from mca\_priv\_ Gate Revision 1.0

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## 1 Problem Description

Ticket <https://multics-trac.swenson.org/ticket/154> describes a problem whereby the target of the gate `mca_priv_$force_unlock` doesn't exist, and invoking this gate entry causes a `linkage_error` in the inner ring (1).

## 2 Analysis

The existing `mca_priv_` gate defines the following entrypoints:

---

|      |                                             |
|------|---------------------------------------------|
| gate | load_ipcs,mca_util_,load_all_ipcs,3         |
| gate | reset_ipcs,mca_util_,reset_all_ipcs,3       |
| gate | force_reset,mca_attach_,force_reset_mca,3   |
| gate | force_unlock,mca_attach_,force_unlock_mca,2 |
| gate | trace,mca_util_,trace_sw,6                  |

---

However, the program `mca_attach_.pl1` doesn't define an `force_unlock_mca` entry. There doesn't appear to be any code that performed this function (force unlocking the MCA) so it appears that this was never implemented, or was removed and the gate never updated.

If you attempt to invoke this entry, you'll get an error similar to the following:

---

```
call "mca_priv_$force_unlock" -i 200 -i 200
```

```
Error: linkage_error condition by >system_library_tools>mca_priv_|135  
referencing !BBBKWGHZwfGXqc.area.linker|16712 (in process dir)
```

---

## 3 Proposed Fix

The proposed fix is to comment out the `force_unlock` gate entry from `mca_priv_.alm`. The only reason to comment this out, rather than remove it, is if, at some future point, we decide this entry is

required (there are no current callers), then we can implement it in `mca_attach.pl1` and uncomment out the gate entry.

Here is the `compare_ascii` comparison of the old and new version of the code:

---

```
cpa [lpn mca_priv_.alm] ==

A26          gate      force_unlock,mca_attach_,force_unlock_mca,2
Changed by B to:
B26          "  commented out by Swenson since this entry doesn't appear to exist in mca_attach_
B27          "          gate      force_unlock,mca_attach_,force_unlock_mca,2
```

Comparison finished: 1 difference, 3 lines.

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## 4 Testing

Testing will involve calling this entrypoint (as shown above with the `call` program) and making sure that an appropriate error message results.

## 5 Documentation

No changes to the documentation are required.

## 6 Version History

|            |     |                             |
|------------|-----|-----------------------------|
| 2022-09-05 | 1.0 | Initial version of the MCR. |
|------------|-----|-----------------------------|