ummap (version 2025-05-10)

USAGE

```
sys ummap,key,memad
```

DESCRIPTION

ummap allows two or more processes share one or more 4K memory pages.

key is a unique value, it allows for processes with the **same user ID** use individual shared memory pages on different processes.

So the internal identifier is the combination of key and uuid.

memad defines where in the process memory the shared page is to be placed. the value is rounded down to a 4K boundary. Memad should never be at F000 or higher, or an error is issued.

If memad refers to a 4K memory page in the process which has already been in use, **THAT page will be freed, the contents discarded** and next, the shared memory page will be put there. (zero-ed out).

If active execution code was present in the discarded memory, the process most likely will crash after that!.

Processes which do the ummap call with the same uuid and same key, share memory in the same process. Each key value denotes ONE 4K shared memory page. Processes should assign a different key if they want to share yet another 4K memory page.

Processes with the same key and uuid can share their 4K shared page at different offset in their process space.
i.e.:

```
process 100 can share the same page at $4000 with
process 123 where the same shared page resides at $E000.
```

Processes with the same key but with different uuid's will never share any shared page.

DIAGNOSTICS

An error is returned if:
- the memad value is at $F000 or higher
- the reserved shared memory pages are all used