Shutdown reason codes are reason codes, not error codes or HRESULTs

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A customer liaison asked the following question on behalf of his customer:

> My customer is finding that their Windows Server 2003 system has restarted, and they want to find out why. I've found some event log similar to the ones below, but I don't know what error code `0x84020004` is. I've searched the Knowledge Base but couldn't find anything relevant. Please let me know why the system restarted.
>
> ```
> Event Type: Information
> Event Source: USER32
> Event Category: None
> Event ID: 1074
> Date: 3/20/2009
> Time: 11:51:30 AM
> User: GROUP1\infraadmin
> Computer: DATA2
> Description:
> The process Explorer.EXE has initiated the shutdown of computer SYSP1 on behalf
> of user GROUP1\infraadmin for the following reason: Operating System:
> Reconfiguration (Planned)
> Reason Code: 0x84020004
> Shutdown Type: restart
> Comment:
> ```

The value `0x84020004` is not an error code. It says right there that it's a reason code:

Reason Code: 0x84020004

The system shutdown reason codes are documented in MSDN under the devious heading System Shutdown Reason Codes. In this case, the value `0x84020004` is a combination of

```
SHTDN_REASON_FLAG_PLANNED               0x80000000
SHTDN_REASON_FLAG_CLEAN_UI              0x04000000 // reason.h
SHTDN_REASON_MAJOR_OPERATINGSYSTEM     0x00020000
SHTDN_REASON_MINOR_RECONFIG            0x00000004
```

That value for `SHTDN_REASON_FLAG_CLEAN_UI` is missing from the MSDN documentation for some reason, but's listed in `reason.h`. The flag means that the system was shut down in a controlled manner, as opposed to `SHDTN_REASON_FLAG_DIRTY_UI` which means that the system lost power and did not go through a clean shutdown.

In other words, this was a planned shutdown that was the result of an operating system reconfiguration. Perhaps somebody changed a system setting in the Control Panel, and in response to the question "The change you made requires that the system be restarted. Restart now?", the person said Yes.