
License and Version Verification

This Addendum contains information on the following topics:

- New License Checking Facility
- Adjust Configuration Parameters with License Upgrade
- Product Version String Changes

New License Checking Facility

InterSystems has modified and extended the license checking facility in Open M [ISM] Version 6.1 to correlate with the company's new product licensing and pricing structure.

You should be aware that in some cases the new license checking facility enforces user count restrictions more accurately than earlier versions of the product did. This means that if the number of users on your system exceeds the number of users for which you are licensed, some users will encounter "license limit exceeded" errors when attempting to use the system.

To avoid such problems, you should take the following steps before installing Open M [ISM] for in a production environment:

1. Familiarize yourself with the new product licensing and pricing structure.
2. Read this document carefully to understand what categories of user licenses the license checking facility counts and how it counts them.
3. Determine how many users in each of the user license categories your system needs to support.
4. Make sure that your product licensing agreement provides for the number of user licenses you require.
5. If your calculations indicate that you need to purchase additional licensing, contact your InterSystems sales representative.

Counting User Licenses

Open M now maintains run-time counters for the following categories of users:

- Directly connected users (maximum # of users)
- Total user processes (maximum # of users + user jobs)
- Remote Client Users—there are three subcategories for this:
 - Remote single-user PC client users
 - Remote multi-user client users (UNIX, Windows, NT, Windows 95, DOS)

Note:In the future, we will subdivide this subcategory into three separate subcategories.

- Remote OpenVMS client users
- Open M w/SQL users—there are three categories for this:
 - M/PACT users
 - Developer users
 - Relational Server users

Accounting for Users and Total User Processes

The category “Directly connected users” is the maximum number of users for which the system is licensed. You can think of this number as the number of foreground jobs. Essentially, it is a check on the number of people who log on to the system via a CRT or equivalent, e.g.:

- Terminal emulation
- Asynchronous connection
- Telnet
- LAT
- rlogin

Note Both OS and call-in scripts count as “Directly Connected Users”.

The category “Total user processes” is the maximum number of directly connected users (as above) plus the jobs created by those users. You can think of this as the combined sum of all foreground and background user processes.

In most cases, the maximum number for “Total user processes” is the same as the maximum number for “Directly connected users”. For example, a 64-user system may support 64 concurrent users with no background jobs, or it may support 32 concurrent users each with one background job, or it may support 8 concurrent users each with 7 background jobs, and so on.

However, the maximum number for “Total user processes” is never less than 12. Therefore, a system licensed for 1, 4, or 8 users is allowed up to 12 concurrent jobs. For example, a 4-user system may support 4 concurrent users with up to 8 background jobs among them, or a 1-user system supports up to eleven background jobs for the lone user.

Accounting for Remote Client Users

The category “Remote client users” counts the number of clients that connect remotely to the server.

The license checking facility does not count network daemons or Visual M daemons in this category. It only counts the number of remote client users.

For example, a single remote Visual M client user might generate 12 jobs on the Visual M server, but these 12 jobs count as only one remote client users (and one entry in the “Remote single-user PC client users” bin).

Similarly, a remote 512-user UNIX client system might create only 8 ISNET daemons on the server, but nonetheless the remote system still uses 512 process slots in the “Remote multi-user client users (UNIX, NT, DOS)” bin.

Remote Visual M client users count exactly the same (and in exactly the same categories) as remote ISNET client users. However, if a single remote client system generates both an ISNET and a Visual M connection to a server, each counts as a separate remote client user.

Multiple Visual M sessions from the same client to the same server count as one remote client user. In the highly unlikely case that multiple Visual M sessions on the same server use different protocols, each session counts as a separate remote client.

Open M w/SQL License Checking

Open M now performs systems-level license checking for the Open M w/SQL development environment. Specifically, this license checking facility checks the following components of the Open M w/SQL development environment:

- Developer
- M/PACT
- Relational Server

The Open M w/SQL license checking facility ensures that the total number of active users stays within the license limits.

When a job halts, its active features are returned to the supply. If a job attempts to activate a feature more than once, the license checking facility does not charge it twice for that feature.

Note License checking handles the Server Master process in the same way as it handles network and Visual M daemons, i.e., the Server Master process does not count as a process in the “Relational Server” category, nor does it count as a process in the “Remote Client Users” category. The Server Master process only counts in the “Total jobs supported by the system” category (described below).

All server processes spawned off by the Server Master count as processes in the “Relational Server” category.

Interoperation with Existing Keys

Open M [ISM] for Version 6.x provides near-complete interoperability with your existing keys. However, you must enter a new key in order to enable server-side networking. Every ISNET server system that upgrades from Version 5.10 to Version 6.x requires this new key.

If your Open M [ISM] for Version 6.x server system is talking to a pre-6.1 -based client system, you do not need a new key for the pre-6.1 client system.

Defining the Total Number of Jobs Supported by the System

Open M [ISM] for Version 6.x requires that you define the total number of jobs supported by your system as a configuration parameter. The total number of jobs includes all user processes as well as network, Visual M, and Relational Server daemons.

Although the license checking facility does not restrict this number, you need to define it during system configuration in order to make the system run. This parameter is a useful mechanism for controlling memory management on your system.

You set the total number of jobs parameter by defining the field “processes=*nnn*” in the `mysql.def` file. Set this field to a value that represents the total number of jobs your system can support. The value can be greater than or less than the maximum number of users value. The maximum possible value is 4,096.

The `SYSMGR` utility chooses a default value for the total number of jobs. It calculates this value dynamically using the following formula:

```
processes = (# of directly connected users) + 10 + (sum of
remote client users)
```

You may override the default value.

Note If your system overflows the total number of supported jobs as defined in the `mysql.def` file, Open M returns an error message, but this error message is not related to the error messages returned for license violations.

Adjust Configuration Parameters with License Upgrade

When you upgrade your license to add more users or add-on features such as Open M/Server, you may need to adjust your system startup parameters.

Edit Parameters in Multiple Locations

ISM stores each system configuration you define in a file called *config.def*, where *config* is the name you specify for the configuration. When you designate one of your configurations to be your start-up configuration, ISM copies that *config.def* to a file called *startup.def*. It also stores the information from *config.def* in the `^SYS("sysconfig",config,2)` global. Thereafter, every time you use SYSMGR for any purpose, ISM copies the *config.def* file to *startup.def*, and updates the `^SYS` global with any changes that were made to the configuration.

Before editing any parameters, you need to find out the name of your running configuration, so that you know which configuration to update. Enter either of the following commands:

```
>W $ZU(86)
```

or

```
>W ^SYS("runconfig",1)
```

To change your default startup configuration, do either of the following:

- From the System Manager Main Menu, select System Configuration, and then Identify Start-up Configuration
- Edit the global `^SYS("startconfig",1)`

Adding More Users

If you are increasing the number of users your license supports, whether or not you are installing a new Open M [ISM] version, you probably need to edit some startup parameter values.

If your version of Open M [ISM] shows these parameters in the System Start-Up Parameters windows of the SYSMGR utility, you must edit them there. If your version does not show these parameters in SYSMGR, you must edit them directly in the *config.def* file, in the *startup.def* file, and in the global `^SYS("sysconfig", config,2)`.

See the following table for the values you must edit, and where you must edit them depending on the version you are running.

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| Parameter Name in SYSMGR | Parameter Name in <i>config.def</i> | Where to Edit, by Version | Set Parameter to this Value |
|---------------------------|-------------------------------------|--|---|
| Maximum User Processes | processes=nnnn | 6.x - Modify in SYSMGR 5.10 - Modify by editing files & ^SYS global | Maximum number of M processes (user, jobbed and ISNET) that will run on this system. |
| TTY Name Table | ttysiz=nnnn | 6.x or 5.10 - Modify in SYSMGR | At least 16 * the number of user log-ins. For example, for 128 users it must be 2048 or larger. |
| Number of Routine Buffers | routines=nnnn | 6.x or 5.10 - Modify in SYSMGR | At least 1 > number of M processes (user, jobbed and ISNET) |

Besides adjusting ISM parameters, you may also need to adjust Unix parameters. These parameters differ for each Unix platform. See the *Open M [ISM] for OpenVMS Alpha Installation Guide* (Version 6.1) or the Installation chapter in your *Open M/SQL OpenVMS Alpha System Guide* Version 5.1 - 5.10), for information on which Unix parameters to adjust. Also see your Unix documentation for details on how to change these parameters.

Adding Networking

If you add Open M/Server (formerly called M/NET), you must use the MNET utility to define one or more network configurations, and then use SYSMGR to indicate your startup network configuration.

- For Version 6.1 and up, you specify a Network Configuration on the Create/Edit System Configuration window, under Items to Activate at Startup.
- For earlier versions, you enter a value for Network Configuration to Initialize at Start-Up in System Start-Up Parameters III window.

For some versions, you also need to specify the following network parameters, or accept the defaults that SYSMGR provides:

- DSM-DDP Volume Translation Table (for DSM-DDP networks only)
- Directory Set and Volume Set Name Table Size (bytes)
- Remote Directory Name Table Size (bytes)
- Maximum Network Cache Buffers Per Process
- Percent of Global Buffer Pool Available for High Speed Network Cache (Version 5.10 and up)
- Maximum number of client connections per server port (Version 6.1 and up)

For more information on SYSMGR, see the *Open M/SQL for UNIX System Guide (Version 5.1 - 5.10)* or *ISM for OpenVMS Alpha System Manager's Guide (Version 6.1)*. To configure a network, see the *Open M/SQL M/NET Management Guide*.

Deleting Networking

If you need to delete networking, you must do the following:

- For version 5.10, you must delete the network configuration from the System Start-Up Parameters III window where it is specified, and delete ALL of the other network parameters listed above.
- For Version 6.x, you need only delete the Network Configuration you have specified under "Items to activate at system start-up" on the Create/Edit System Configuration window.

Product Version String Changes

The product version string returned by the \$ZVERSION function now reflects the new name for InterSystems' product line—Open M.

Formerly, the version string displayed as:

If your applications parse \$ZV or test for certain values in it, you need to adapt them to the new nomenclature.

As InterSystems moves toward a unified product, the version string will continue to change. You should take into account that, in a future unified release, the version string will no longer include any implementation identifier such as ISM. For example, the version string for Open M on the Windows 95 and NT platform will be:

```
Open M for Windows 95
```

We have also changed some platform names in order to avoid redundancy or inconsistency under the new product naming. You need to examine the \$ZV version string to see how these changes affect your application. You can also display the version string using the ^VERSION utility. Both ^VERSION and \$ZV do not include the DBMS version in their version string displays, as they did previously. Instead, use the %SS utility to display the DBMS version.