

Installation Guide



Tribon M3

Tribon M3 Installation Guide

Contents	Page
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Installation Guide

Overview	1:1
General	1:1
Minimum Hardware/Software Requirements	1:1
Planning the Installation	1:1
A Stand-alone Windows Client	1:2
Multiple Windows Clients in a Network Sharing Discs	1:2
Windows client(s) in a Network using a UNIX or OpenVMS Host as Database Server	1:3
Contents of the Installation	1:3
What's on the Delivery CD?	1:3
3rd Party Requirements	1:3
Windows Client Requirements	1:3
Installation of Tribon	2:1
Installation Roadmap	2:1
Quick Start Installation	2:2
Installing Tribon Software	2:2
Configuring Tribon Software License Control	2:2
Option 1: Local Installation of License Server	2:3
Option 2: Remote Installation of License Server	2:5
Troubleshooting Licensing Problems	2:5
Checking the License Server is running	2:5
Installing the Dongle Driver	2:6

Verify Installation on Windows	2:7
Installation of Database Servers on other Platforms	3:1
General	3:1
Specific VMS Recommendations	3:2
Migration from Tribon M2 to Tribon M3	4:1
New Object Format.	4:1
Assembly Planning	4:1
Going from Oracle 8 to Oracle 9	4:1
Upgrade of PDI Database.	4:3
New Object Storage for Tribon Initial Design	4:3
Converting Diagram Stencils	4:3
Concurrent Use of M2 and M3.	4:4
Platform Requirements for Tribon M3	A1:1
General	A1:1
Supported Platform.	A1:1
License Control.	A1:1
Requirement for Hardware and Network	A1:2
General	A1:2
Disk Space Requirements	A1:2
Displays	A1:2
Hardware Specification	A1:2
Minimum Server (5 to 40 Users*)	A1:5
Recommended Server (5 to 40 Users*)	A1:5
Minimum Client Workstation PC (and Server up to 10 Users)	A1:5
Recommended Client Workstation PC (and Server up to 10 Users)	A1:6
Minimum Client Workstation PC	A1:6
Recommended Client Workstation PC	A1:6
Graphics	A1:6
Network	A1:7
Distributed Way of Working	A1:7
Tribon 5 and Tribon M3 Inter-operability	A1:8
Silent Installation of Tribon M3	A2:1
General	A2:1
Instruction.	A2:1

Using the Script	A2:1
Using the Setup.log to Check for Errors	A2:2
Installation of Tribon in Oracle.....	A3:1
General	A3:1
Before you start	A3:1
Tribon System Schema Installation	A3:1
Tribon Project Schema Installation	A3:2

1 Overview

1.1 General

This Installation Guide describes how Tribon M3 is installed on a Windows platform. It mainly describes a local installation. [A2 Silent Installation of Tribon M3](#) contains additional information about silent installations.

The Guide is valid for Windows XP as well as Windows 2000.

In order to run any program, a license file and a dongle are needed. These must be supplied separately from Tribon Solutions AB. To install the Tribon Solutions AB dongle, shutdown the PC. Plug the dongle into the printer port (LPT1) and restart the PC, (this is not required if the dongle has been plugged in during the installation.)

If Tribon M1 or Tribon M2 is already installed it must be uninstalled.

Before uninstalling, it is advisable to make sure that no user defined or modified directories or files exist on the Tribon root directory; The installation may supersede such files. Especially modified old sample projects should be considered.

1.2 Minimum Hardware/Software Requirements

For installation of Tribon M3 products, Tribon Solutions AB recommends a minimum hardware and software specification which depends on the intended usage of Tribon. The recommendation is described in [A1 Platform Requirements for Tribon M3](#).

1.3 Planning the Installation

Implementing Tribon M3 for the first time at a customer's site usually requires the following steps to be taken:

- **Planning**, i.e. planning the installation with regards to the available hardware, the available network and the intended user organisation to get the optimum performance from Tribon.
- **Installation**, i.e. installing the software that has been delivered and licensed and, in addition, making a test to verify that all software has been implemented.
- **Configuration**, i.e. setting up project servers and database servers as decided in the planning phase.
- **Customisation**, i.e. defining specific customer parameters in order to make each Tribon application work create data in the way a customer prefers.

This Installation Guide covers the first three steps while each separate application (Tribon Hull, Pipe, Cable etc.) contains all necessary tools for the fourth step.

Implementing a new release of Tribon M3, or adding on new applications to an existing Tribon M3 installation usually means a simpler version of the steps above and maybe only needs parts of the first step.

Implementing Tribon M3 Initial Design only needs parts of the first steps.

This guide, together with other Tribon documentation, contains all information in order for a customer to do the entire implementation. In addition, Tribon Solutions may assist in the implementation on a consultancy basis.

There are three major types of installations of Tribon M3, which each put different requirements on preparations, configuration and on what parts of Tribon that has to be installed.

- A stand-alone Windows client.
- Multiple Windows clients in a network sharing discs.
- Windows client(s) in a network using a UNIX or Open VMS host as database server.

Important: It is important to decide what type of installation that is required before starting the installation, since that will rule the choices during the actual installation.

1.3.1 A Stand-alone Windows Client

In this case, the Windows machine will have everything needed to run Tribon installed on local discs. This includes all project data that is to be accessed.

This setup, as a minimum, requires installation and configuration of the following items:

- License server is normally both installed and started as a part of the installation. If not see [2.4 Configuring Tribon Software License Control](#) to configure this.
- Tribon programs, e.g. Hull programs
- Administrative tools, see *Tribon M3 Administrator's Guide*.
- If needed, the surface server(s) of choice, see *Tribon Surface Server in Administrator's Guide*.
- If the sample project is selected during this installation the TID Lines surface server is both installed and started. The sample project will then be fully configured for immediate use after installation. (However, if the computer needs to be rebooted, then the surface server will have to be restarted manually.)

1.3.2 Multiple Windows Clients in a Network Sharing Discs

In this setup several Windows machines will work together towards the same project(s), in a multi-user environment. This setup requires some more steps, and the installation requires some decisions being made.

- Select, at least, one machine to be license server
- Select one or more machines to be database server(s) and/or surface server

On the license server(s) install and configure

- License server, see [2.4 Configuring Tribon Software License Control](#).

On the chosen database server(s) it is required to install and configure:

- Database server, see *Data banks & Objects in Tribon Administrator's Guide*.
- Administrative tools, see *Tribon Administrator's Guide*.

On clients:

- Tribon programs, e.g. Hull programs

- Configure database and/or surface access, see *Data banks & Objects in Tribon Administrator's Guide*.

1.3.3 Windows client(s) in a Network using a UNIX or OpenVMS Host as Database Server

This setup is very similar to the one with multiple Windows clients in a network. The difference being that the database server of choice is a UNIX or Open VMS machine. The setup on the Windows side is the same in both cases, and projects, apart from the databases, still reside on shared Windows discs. On the UNIX or OpenVMS host it is needed to:

- Copy the database servers from the subdirectory on the Tribon M3 setup CD that corresponds to the operating system used on the database server machine, and start them as described in section [3 Installation of Database Servers on other Platforms](#).

1.4 Contents of the Installation

1.4.1 What's on the Delivery CD?

Below is a list of items. The list is not totally complete and may differ from the CD directory structure. Please refer to the detailed information delivered with the CD.

- **Adobe Acrobat reader**
 \AcrobatReader4\
- **Tribon DB servers for other platforms**
 \DB Servers non_Win32\
- **Tribon surface servers for other platforms**
 \SurfServers non-Win32\
- **Software to be able to run Tribon with Oracle**
 \Orainst\
- **MDAC, the Microsoft Data Access Component**
 \MDAC\
- **Various tools needed by Tribon Initial Design**
 \Extras\
- **FlexLM Dongle Drivers**
 \Sentinel Drivers\

1.5 3rd Party Requirements

Appendix [A1 Platform Requirements for Tribon M3](#) contains information about 3rd party software that must have been installed from other sources and are not delivered on the CD.

Appendix [A3 Installation of Tribon in Oracle](#) contains some further information related to the installation of Tribon in an Oracle database.

1.5.1 Windows Client Requirements

Requirements:

- Microsoft XML Parser (normally included in Microsoft Internet Explorer).
- Microsoft Data Access Components (MDAC) 2.5 SP1, normally included in the Windows prerequisite version.

To install MDAC, run MDAC_TYP.EXE from the Tribon M3 installation CD. It is located in the \MDAC folder.

2 Installation of Tribon

2.1 Installation Roadmap

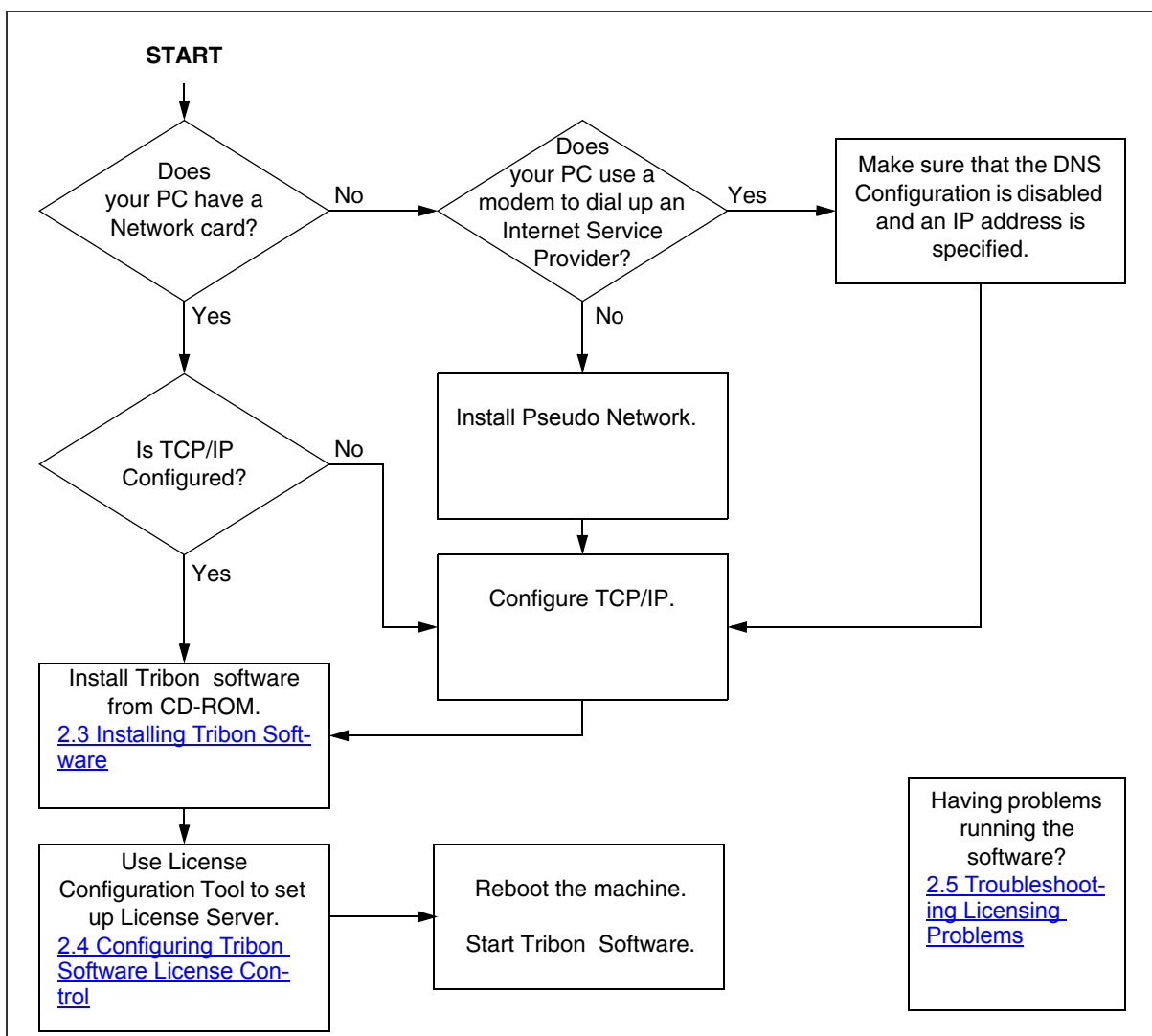


Figure 2:1. Diagram Illustrating the Installation Procedure.

2.2 Quick Start Installation

(The default path `C:\Tribon\M3` will be used throughout this document even if another path can be selected during the installation.)

1. Install and configure TCP/IP (if not done already).
2. Insert CD, run the `Setup.exe` file in the **root** directory. Give appropriate answers when prompted as to where the software should be copied and what to install.
3. Run the Tribon License Configuration tool via the **Start** menu, by selecting `PROGRAMS \ Tribon M3 \ Administration tools \ Control Panel` and in the Control Panel run License Configuration.
4. Reboot the machine.
5. Check that the License Manager is running by viewing the log file either via the **Start** menu, by opening the file directly,
`C:\Tribon\M3\FlexLM\KCS.LOG`

Note: Please note this step is only relevant for a local License Server configuration.

6. Run Tribon M3 applications by using the **Start** menu, selecting
`Programs \ Tribon M3 \\`

2.3 Installing Tribon Software

The software is normally supplied on a CD. In the following instructions substitute the appropriate drive letters for your CD (normally `D:`) and your hard disk (normally `C:`).

1. Start Microsoft Windows.
2. Insert the CD into drive <CD drive>.
3. Follow the instructions delivered together with the CD, or alternatively, select the **Start** button and choose Run from the menu. Enter `<CD drive>:\setup` and click the **OK** button to start the installation program
4. Follow the on-screen instructions and dialogues to install the software. During the installation process you will be asked a number of questions, like where the software shall be installed, what type of installation is wanted, and so on.

Regarding the setup type, select Typical to install a full Tribon M3 installation, or select Custom to explicitly select individual Tribon M3 components to install. Full Tribon M3 Installation means all Tribon M3 programs except the Licences Server, the Database Server and any Surface Servers. In order to install any of these programs, it is necessary to select Custom installation.

It is strongly recommended to use mapped disk names if the destination folder is modified.

For the license server, the local installation requires a licence file to be available. Select browse to find the `*.dat` file with the given licence information.

The hardware lock (dongle) should be connected to the PC during the installation using a local licence server.

This is the last step of the Tribon M3 installation.

2.4 Configuring Tribon Software License Control

Run the License Configuration Tool, located in the Tribon M3 Control Panel.

The program may look like this:

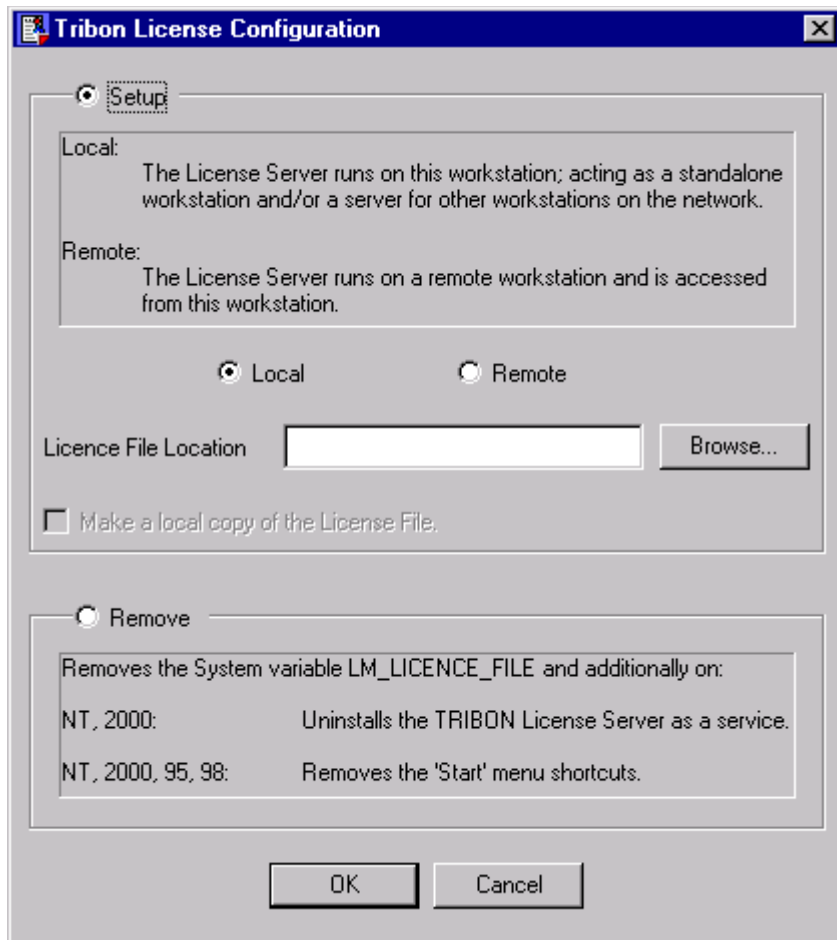


Figure 2:2. Tribon M3 Licence Configuration Tool.

You now have two options:

1. Run the Tribon License Server locally on the Windows workstation.
2. Connect to a Tribon License Server on a remote workstation located elsewhere on your network.

2.4.1 Option 1: Local Installation of License Server

1. Ensure the **Local** radio button is selected, and press **Browse...** to find your license file. This license file may be either on your hard disk, or on a floppy disk, which is usually provided by Tribon Solutions AB. Once you have found your license file, highlight it, then press the **OK** button.
2. The Configuration tool then displays messages to show what changes it has made. These changes are as follows:

The license file you specified is copied to an area of your Hard Disk, and is renamed to `License.dat`, then modified to contain the name of your workstation, see [Figure 2:3.: Typical License.dat File for Dongle Serial Number 9876](#).

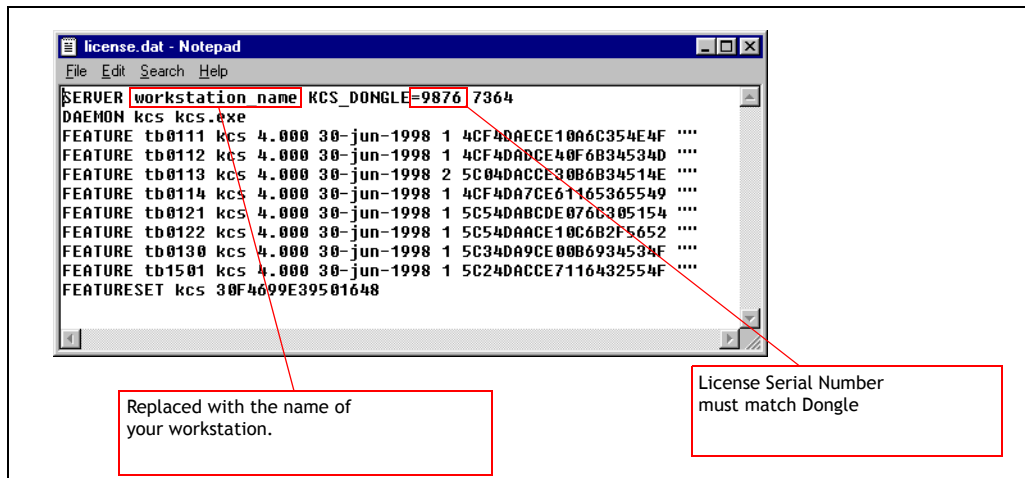


Figure 2.3. Typical License.dat File for Dongle Serial Number 9876.

- An environment variable is set up in registry, as shown in the example below:
LM_LICENSE_FILE=C:\TRIBON\M3\Flexlm\License.dat
This is so that the Tribon Software knows where to find the license file.
This can be viewed in the System Properties dialogue, **Environment** tab. This accessed by selecting from the **Start** menu, SETTINGS \ CONTROL PANEL and then "System" from the Control Panel dialogue.
- The Tribon License Server is installed as a service.

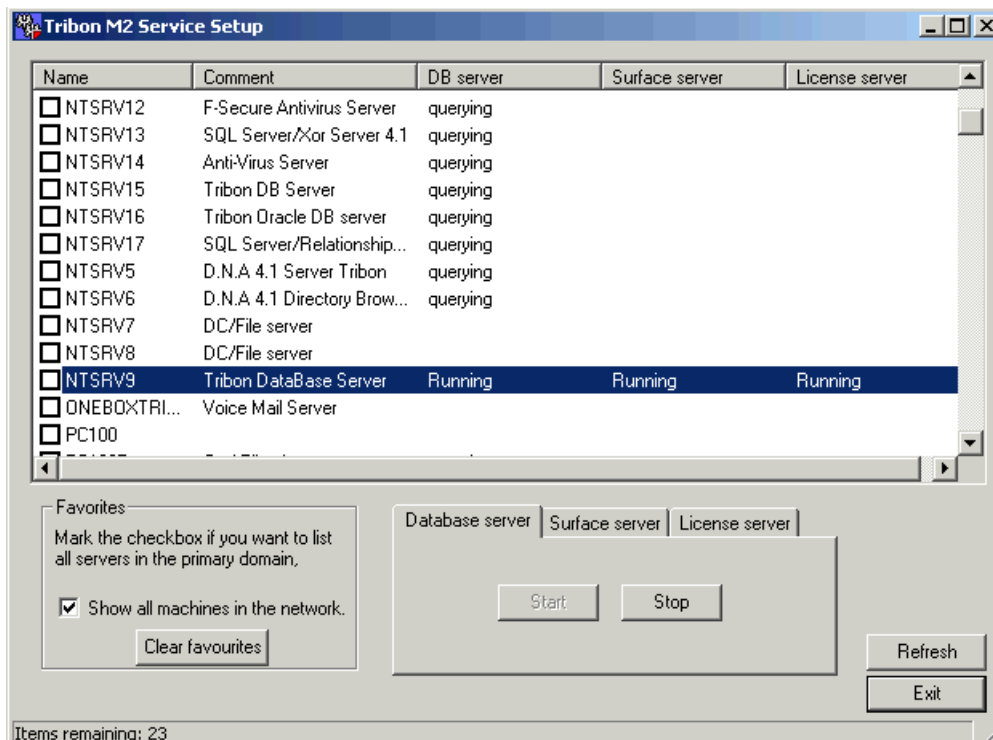


Figure 2.4. Services Dialogue.

The service is setup to start automatically on start up, however the server can be stopped and started manually via the Services Dialogue. This dialogue is accessed via the **Start** menu, selecting Tribon M3 \ Administration Tools \ Control Panel and then

"Tribon M3 Service Setup" from the Control Panel dialogue. (Windows versions differ slightly regarding the operation of settings.)

2.4.2 Option 2: Remote Installation of License Server

This option uses a License Server and License file that is already running on another machine in your network.

The remote installation is useful if you have a number of licenses, and you would like several users to be able to share them from machines on the network.

1. Make sure that the license server and license are configured correctly on the remote PC you will be using as the host [this part is done using the local installation instructions, see [2.4.1 Option 1: Local Installation of License Server](#).
2. Also ensure that you can 'see' the remote machine's hard disk from the local machine [in Windows Explorer]. This is vital, as you need to tell the configuration tool where to get the license file from.
3. Select the **Remote** radio button on the configuration tool. Press **Browse...**, and select the license file [usually called `License.dat`] from the remote machine.
4. There is also a check-box where you can choose to **Make a local copy of the License File**. Tribon Solutions AB recommends that the user has this option ON. This is because the local machine may not always be able to 'see' the drive on the remote machine, and if you have a local copy of the license file this will not cause problems.
5. Now press the **OK** button - the configuration tool will now set the environment variable in your registry, as shown in the example below:

```
LM_LICENSE_FILE=C:\TRIBON\M3\Flexlm\License.dat
```

This is so that the Tribon software knows where to find the license file.

2.5 Troubleshooting Licensing Problems

The areas where problems occur are:

- the dongle driver has not been installed. See [2.5.2 Installing the Dongle Driver](#)
- the TCP/IP protocol has not been configured properly.
- the license manager has not been started. See [2.4 Configuring Tribon Software License Control](#)
- the license file, `License.dat`, is incorrect or not in the correct place, see [2.5.1 Checking the License Server is running](#). (Please **note** that with the current License Manager, only a single license file can be accessed on a machine at any one time.)

Should you have a problem then please check the above but if you cannot find the problem yourself then you should get in touch with Tribon Solutions AB Customer Support and provide the following information:

- License file. See [2.4 Configuring Tribon Software License Control](#)
- Environmental setting for `LM_LICENSE_FILE`. See [2.4 Configuring Tribon Software License Control](#)
- TCP/IP settings.

2.5.1 Checking the License Server is running

1. To verify that the License Server is running examine the log file by viewing the log file by opening the file directly,

```
C:\TRIBON\M3\FlexLM\KCS.LOG
```

Note: Please note this step is only relevant for a local License Server configuration. If a remote Server is being used, then you need to do this check on the License Server workstation itself.

This should look similar to the following:

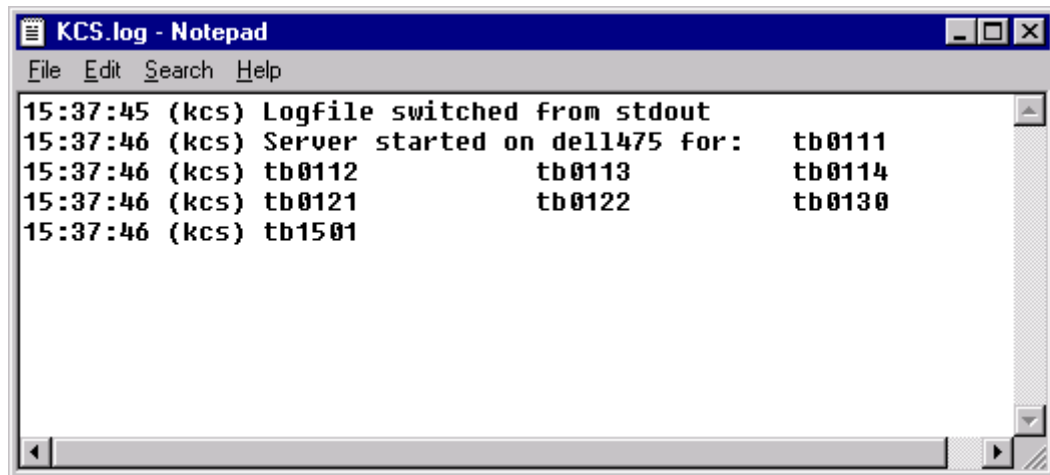


Figure 2.5. Notepad Displaying the KCS.log File.

- Alternatively you can use the Utilities Tool to examine the status. This is accessed by opening the file directly,

C:\TRIBON\M3\FlexLM\LMTOOLS.EXE

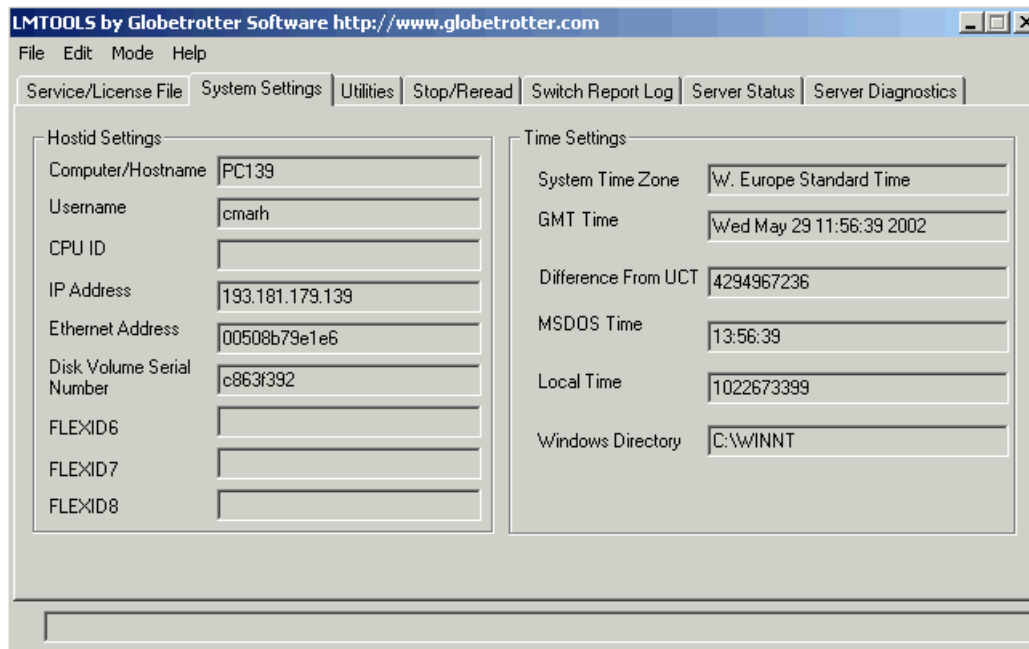


Figure 2.6. Lmtools Dialogue. (The look of this dialogue differs between different versions of FlexLM.)

2.5.2 Installing the Dongle Driver

All major Tribon applications are protected using a license server called FlexLM combined with a hardware key, commonly known as a dongle. The dongle is programmed with a

unique customer Serial Number which ties the license manager to a particular workstation or server.

Note: that the Serial Number must match the Serial Number of the `License.dat` file described in [2.4.1 Option 1: Local Installation of License Server](#).

In order for the dongle to be accessible from the License Server it is necessary to install a special driver. This is automatically done by the installation kit, however if it fails it can be installed from the CD by following these instructions:

Other parallel port devices may be chained to the dongle as it has been designed to pass through all data not intended for the dongle itself.

- Insert the CD and run the installation tool

```
<CD Drive>\Sentinel Drivers\WIN_NT\SETUPX86.EXE
```

Note: that this only takes a fraction of a second to execute and you will only get a message if something goes wrong.

2.6 Verify Installation on Windows

A successful installation results in a new program group 'Tribon M3' in the Windows start menu.

Two Windows environment variables are set as part of the installation procedure and can be checked:

Start Menu > Settings > Control Panel > System > Advanced > Environment variables

- TB_ENV_TABLE should be set to
`TRIBON\M3\config\tbenvtable.sbd`
- LM_LICENSE_FILE should be set to
for local dongle: `TRIBON\M3\config\license.dat`
for remote dongle: `7362@<name of PC with dongle>`

Optionally you may also add the directories

```
TRIBON\M3\bin
```

to the Windows PATH environment variable.

It may be necessary to add an initial driveletter, e.g. "C:\\" in the beginning of the settings above.

3 Installation of Database Servers on other Platforms

3.1 General

To be able to access Tribon databases on OpenVMS or UNIX, database server components based on the RPC protocol need to be installed on the OpenVMS or UNIX server where Tribon projects are stored.

Customers using only the Tribon M3 Initial Design part of the Tribon M3 system may disregard from this chapter.

The following steps are required:

- The Portmapper needs to be configured and enabled (under OpenVMS this is done in TCP/IP Services).
- The OpenVMS or UNIX files from the Tribon M3 CD should be copied to a separate directory on the server.
- Modify the SB_SYSTEM environment variable to also point to the directory where the Database Server components are stored. This directory should come first in the SB_SYSTEM path. Then reassign SB_BIN to the directory of the Database Server components.
- Under a Tribon user account the server needs to be started with the command:
 OpenVMS: @SB_SYSTEM:C670TBISAMSERVER start
 UNIX: c670tbisamserver -start
- Reassign SB_BIN to its original value.

Note: The UNIX Database Servers delivered with Tribon M3 are compatible with Tribon 5.0 Database Servers, but with extended functionality. If Tribon M3 should connect to databases on UNIX, it is strongly recommended to use the Database Servers that are delivered on the Tribon M3 CD, and not the ones delivered in Tribon 5.

To be able to access a Tribon project databases that resides on discs not local to the Windows client, the connection to the database server on the machine that physically hosts the discs needs to be configured. Section *Data banks & Objects in Tribon M3 Administrator's Guide* contains further information about setting up Database Server connections.

Windows Example:

Assume that the Tribon databases are stored in a directory

c:\TRIBON\MyProjects\P1\db

on the database server machine dbserver1.

The line

```
SB_DB_LOC1 c:\\\\TRIBON\\MyProjects\\P1\\db\\* dbserver1
```

in the corresponding D065 project file will route access to the databases in this directory to the dbserver1 host.

Note: Please note the \ convention, i.e. special characters need to be prefixed by a ". For a more detailed discussion about special characters, see section *Data banks & Objects in Tribon M3 Administrator's Guide* about Database servers.

OpenVMS Example:

Assume that Tribon databases are stored in a directory

```
$DISK0:[MYPROJECTS.PNAME.DB]
```

on the database server dbserver2.

The line

```
\\$DISK0\\:[MYPROJECTS.PNAME.DB\\]* dbserver2
```

in the corresponding D065 project file will route access to the databases in this directory to the dbserver2 host.

UNIX Example:

Assume that Tribon databases are stored in a directory

```
/usr/tribon/projects/pname/db
```

on the database server dbserver3.

The line:

```
/usr/tribon/projects/pname/db/* dbserver3
```

in the corresponding D065 project file will route access to the databases in this directory to the dbserver3 host.

3.2 Specific VMS Recommendations

It is highly recommended to keep disks defragmented and to use the defragmentation tool regularly.

A fast network connection is important for the performance and several CPUs give better access.

The databases should preferably be spread over several disks, and the IO load should be monitored regularly.

Tribon database server related parameters

System parameters

\$Show Mem

MAXPROCESSCNT	Maximum number of processes
BALSETCNT	Maximum number of Balance set slots
	2 less than MAXPROCESSCNT

Related process parameters "setup in authorize"

The Tribon SuperServer will dispatch SubServers as detached processes that will require a minimum of:

BYTLM	>= 10000
ENQLM	>= 100
PGFLQ	>= 10000
FILLM	>= 50

These parameters are also stated in c670tbisamserver.com

Note that these are minimum requirements. For performance reasons the configuration below is recommended.

The user that starts the ISAM server should be in the same group as the Tribon users or be a privileged user like SYSTEM

Tribon M3 database server on Open VMS Alpha requires approx 2-3 MB RAM/subserver

Configure the user that starts the Isamserver like this

Wsdef	10000	
Wsquo	30000	
Wsextent	100000	
Maxdetach	0	!unlimited

Example of other parameters

Byt1m	150000
Pgflquo	300000
Fillm	100
BI01m	2048
DI01m	2048
AST1m	4096
Enqlm	2048

Do not increase the value at these parameters without a proper performance analysis. Too large quotas may decrease the performance.

Tools to monitor performance

```
$Monitor disk/item=all
```

Displays Disk IO and IO Queue, avoid Queue! If you have IO Queue, consider to move some databases to other disks.

Network parameters:

```
$MCR NCP
```

```
$NCP> show known exec char
```

The parameter *maximum number of links* set maximum number of connections to database server.

4 Migration from Tribon M2 to Tribon M3

4.1 New Object Format

Tribon M3 applications store objects in a new format (v4) that overcomes the limit of 65535 elements per object. A direct consequence is that there is no longer any practical limit on how much information a Tribon drawing can contain.

Tribon M3 applications can read objects from earlier versions of Tribon, but will always store objects in the new format. This means that it is NOT possible to access an object written by a Tribon M3 application with an application from any earlier Tribon release. Effectively this means that once a project has been updated by Tribon M3 applications, there is no way to go back and use for instance Tribon M2 on that project.

To protect old projects when starting to use Tribon M3, so that they do not get inaccessible by mistake, Tribon M3 applications contains an advisory security feature that prevents them from writing objects to projects which are not meant to be updated by Tribon M3. In order to make a project updateable by Tribon M3, the Tribon environment variable `SBB_ENABLE_V4_OBJECT_STORING` has to be set to TRUE in that project.

Important: All Users, migrating from M2 to M3 should observe this and set the variable above.

4.2 Assembly Planning

The assembly database is reorganised in Tribon M3 as compared to Tribon M2. The old Assembly tree objects are replaced by new Assembly node objects. All data for one assembly is now kept in the Assembly node object. This object also holds the references to the parent assembly, subassemblies and model parts. The M2 assembly database must therefore be upgraded to Tribon M3 format before accessing it in Tribon M3. The upgrading is done by a conversion program. The conversion program is executed from the command prompt > ph021. After the conversion, the assembly database cannot be accessed by older Tribon applications.

Important: All Users of Tribon M3 Assembly Planning must observe this need for conversion.

4.3 Going from Oracle 8 to Oracle 9

This is only relevant for those users, which use Oracle-based databases instead of Tribon native databases:

For Tribon M3, Oracle 9.2 is a prerequisite. Current users of Oracle 8 for any part of Tribon must therefore first migrate the Oracle database and then migrate the M2 projects. This activity is done in the following steps:

1. First make a backup of the database before attempting any upgrade or migration operations
2. Upgrade the Oracle database.

Database upgrade from Oracle8i (8.1.7) to Oracle9i (9.2.0.4) is an operation that has no special Tribon tools or utilities. This complete action is performed using Oracle tools and utilities in accordance with the migration/upgrade operations that are described in "*Oracle9i Database Migration*".

- Upgrade your environment from Oracle8i to Oracle9i (9.2.0.4) in a fashion that suits you. Please consult "*Oracle9i Database Migration*" for full details.

- *Suggested alternative 1.*

Do the database upgrade according to *Chapter 7* in "*Oracle9i Database Migration*".

- *Suggested alternative 2.*

Install an Oracle9i (9.2.0.4). Follow the migration scenario described in *Chapter 6 "Oracle9i Database Migration"* exporting from your Oracle 8i and importing to your Oracle9i Server.

- Back up, this is a position where you have your M2 installation on the new server running Oracle 9.2.0.4.

3. Upgrade the Tribon System Schema by executing `sysm001.sql` as Tribon System Schema Owner. (This also makes it possible for M2 and M3 projects to co-exist in the same Oracle installation.)

The script upgrades the Tribon System Schema to M3 and upgrades project schemas to M2 with M3 system schema support.

- Locate the `Orainst` directory
- Start SQLPlus
- Logon as Tribon System Schema owner
- Execute script `sysm001.sql`
- Answer the prompts given
- Check the spool file for errors

4. For each M2 project to be migrated to M3, upgrade the Tribon Project Schema by executing `prjm001.sql` as Tribon Project Schema Owner.

The script upgrades the Tribon Project schemas to M3.

- Locate the `Orainst` directory
- Start SQLPlus
- Logon as Tribon System Schema owner
- Execute script `prjm001.sql`
- Answer the prompts given
- Check the spool file for errors

Note: For M2 projects that are to co-exist with M3, this upgrade shall not be done.

The two scripts `sysm001.sql` and `prjm001.sql` are supplied by Tribon Solutions.

It is possible to keep some projects as M2 projects, while others are migrated to M3, and new projects are created as M3 projects. This may be practical for customers with many parallel ongoing projects.

Important: All Users of Oracle-based databases in Tribon M2 must observe this need for conversion.

4.4 Upgrade of PDI Database

The PDI database needs to be upgraded in Tribon M3 from version 710 to 711 by running the scripts `pdi_upgrade_710.sql` and `cmp_upgrade_710.sql`. (These scripts are supplied by Tribon Solutions.)

If the upgrade is not done then transfer of components from M3 applications will fail.

Important: All users of Tribon M3 Production Data Interface (PDI) must observe this need for upgrade.

4.5 New Object Storage for Tribon Initial Design

All Tribon Initial Design (TID) objects can now be stored and managed within the Tribon Product Information Model (PIM) environment. Alternatively, initial design objects can be stored in “stand-alon” TID projects, which can be integrated into the Tribon PIM at a later date.

Setting up a project depends on whether TID is being used within the full Tribon PIM environment or standalone. However, once a project has been setup, working with TID is the same whether used standalone or not.

If TID objects are to be integrated into the Tribon PIM, then make sure the Tribon Environment variable `SB_NAVARCH` is set for the current Tribon project. The value of this variable should be a folder where TID designs will be stored; normally a sub-folder of the main Tribon Project folder. The user should also ensure that the Tribon environment variable `SB_TID` is set. This indicates the databank to which Initial Design objects are stored for use by Basic Design and Hull.

A project can then be selected by using the Tribon Project Selection application.

Tribon M2 (or earlier) designs can be incorporated into Tribon M3 projects. Set up a project (either as part of the Tribon PIM or standalone) and, using the Tribon M3 Initial Design Project Tool, import designs into the selected project.

Further detailed information can be found in a TID Release Note for Tribon M3.

Important: All TID users must observe the need for these conversion activities.

4.6 Converting Diagram Stencils

In Tribon M3 Diagrams there is a special function to be used to migrate M2 stencils into M3 forma. This is further described in a Diagrams Release Note for Tribon M3.

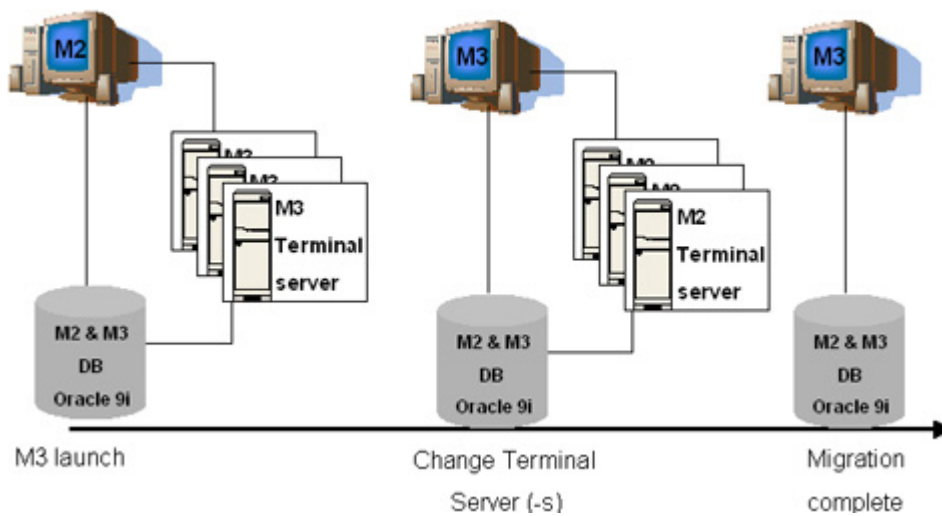
Important: All Diagrams users must observe this need for stencils conversion.

4.7 Concurrent Use of M2 and M3

By using an MS Terminal Server environment it will be possible to run Tribon M3 while keeping Tribon M2 for some projects. In an initial stage, M3 can be run on the current M2 workstations. At some time later, when more projects are made in M3, then M2 should be installed on the Terminal Server machines, and the individual workstations can all be upgraded to M3. During the migration period, a special scheme should be kept for the gradual upgrade of client workstations to M2, as the workload shifts from M2 to M3 projects.

This concurrent use of M2 and M3 may be suitable for customers with many ongoing parallel projects.

The picture below illustrates the migration steps:



A1 Platform Requirements for Tribon M3

A1.1 General

This document describes the overall requirements on hardware, operating systems and basic software to run Tribon applications on Windows.

Single products might have specific requirements. For details on a specific product, please see the product specification.

A1.1.1 Supported Platform

Supported platform is Intel 32bit based Windows.

All Tribon M3 applications require:

- Windows XP (Service Pack 1 or higher) or
- Windows 2000 (Service Pack 3 or higher).
- Internet Explorer version 6 (Service Pack 1) or higher.

Some Tribon M3 applications and options also require:

- Microsoft Excel is required in Tribon M3 Hull, Basic Design, and Outfitting.
- Microsoft Visio, minimum 2002 SR1 STD, is required in Tribon M3 Diagrams.
- Oracle 9.2 is required in Tribon M3 Product Data Interface and Tribon M3 Extended Data Management. (Due to a bug in Oracle, 9.2.0.4 is a prerequisite. This corresponds to 9.2.0.x upgraded with patchset #3095277.)

Tribon M3 is designed to run in a network. If Tribon M3 is to be run on a stand alone machine, then a virtual network (also called pseudo network) must be installed. Information on how to install a virtual network can be found on Microsofts Internet pages.

Tribon M3 presupposes that TCP/IP is properly configured.

For further detailed information about prerequisites for a specific application, please see the corresponding product specification.

A1.1.2 License Control

Licence control is made by FLEXlm 9.0 and dongles (hardware locks).

A1.2 Requirement for Hardware and Network

A1.2.1 General

To operate Tribon M3 efficiently there is a need to follow the below requirements. Some requirements are an absolute must to run the software and others should be regarded as recommendations.

Tribon Solutions AB asks the customer to verify that the requirements have been implemented before contacts are made with local support to seek assistance with the Tribon system.

A1.2.2 Disk Space Requirements

The following table shows the disk space required for a Tribon M3 installation.

Application	Disk requirements *
Initial Design	200 MB
Basic Design	200 MB
Drafting	200 MB
Hull	1100 MB
Weld Planning	200 MB
Outfit	400 MB
Design Manager	100 MB
Production Manager	100 MB
Assembly Planning	100 MB
Documentation	100 MB
Sample and template project	100 MB
Total	2800 MB

* The figure for each application is approximative and includes various environment files.

A1.2.3 Displays

Tribon M3 has been optimized for a screen area of at least 1024 by 768 pixels (recommended: 1280x1024) and the normal display font size (96 dpi). Using a smaller screen area or a different display font size might change the intended look of some dialogs and windows.

A1.3 Hardware Specification

A normal Tribon installation will be based on a network solution, with multiple PC Workstations running against the same Tribon database on a server, communicating with yet other servers and the client applications to be installed on the local PC Work-station.

In a Tribon M3 installation the servers play different roles like

- File server
- Surface server
- License server
- Project server
- Database server

All these roles could be played by a single server but because of performance reasons in a large configuration or redundancy they could be separated on several different servers or being mixed. Some examples of this are shown in the following two pictures.

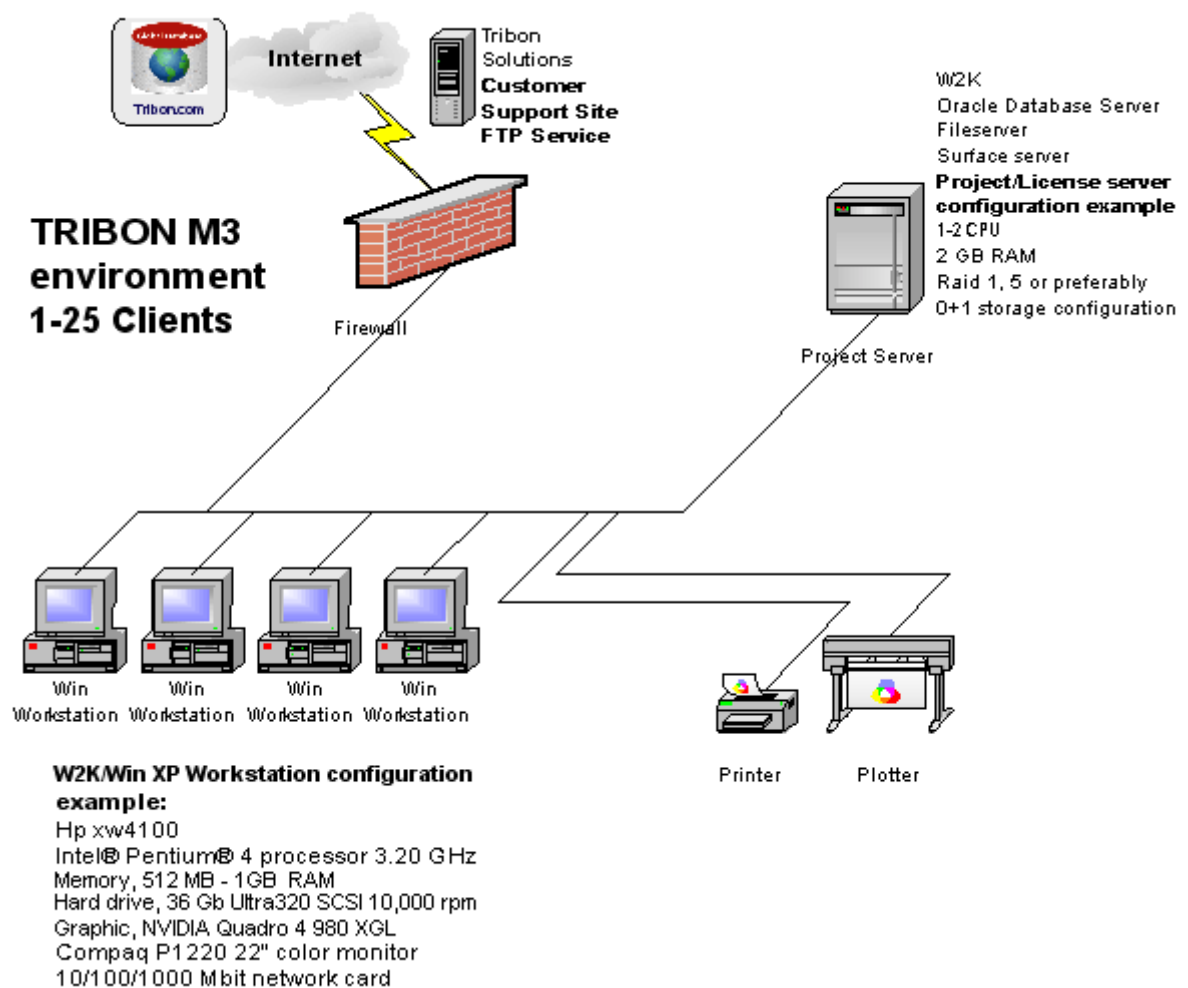


Figure A1:1. Example with 25 users

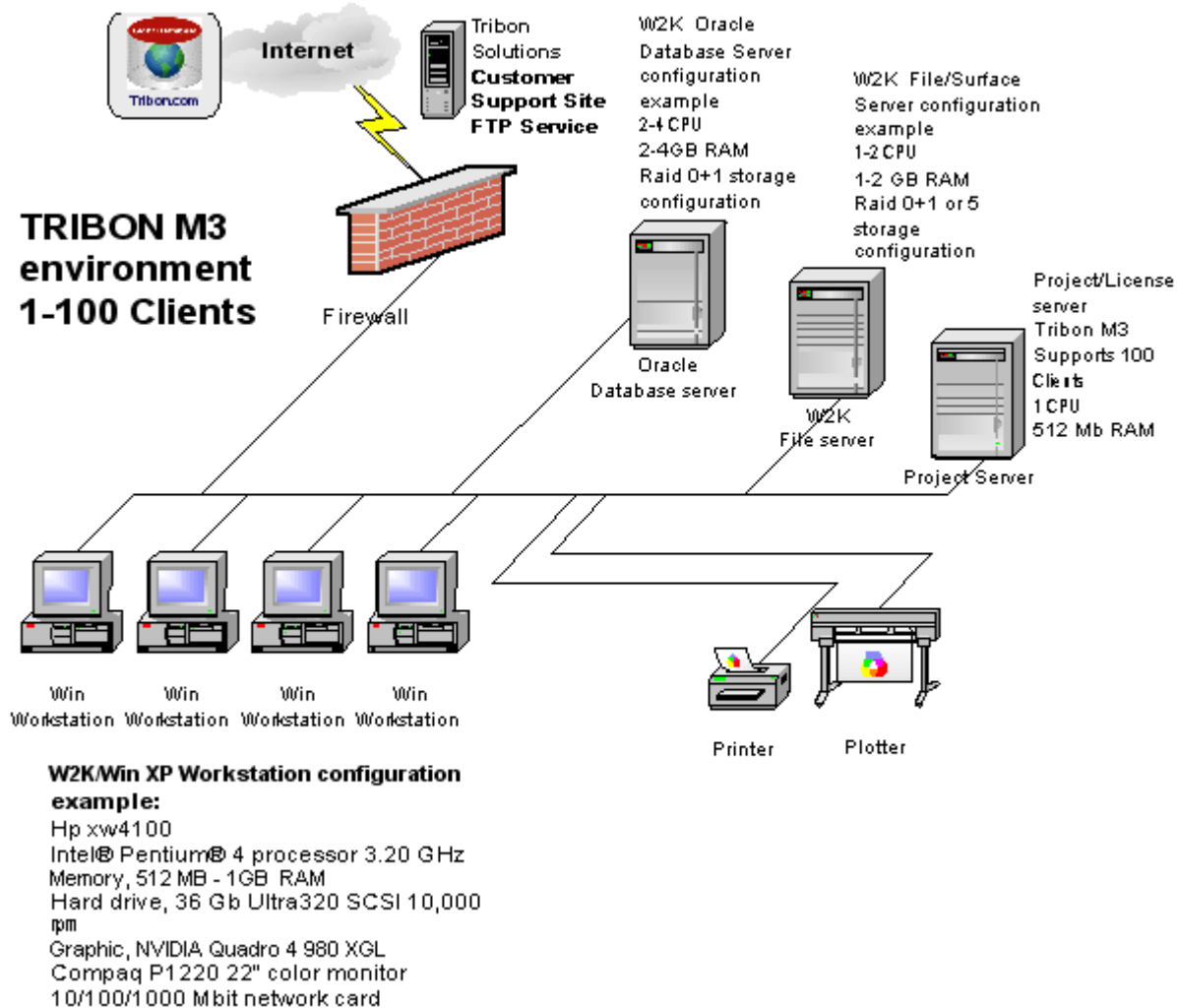


Figure A1:2. Example with 100 users

The File server will be storing data not stored in the database like the following project files:

Proj\dat	Defaults and standards (e.g. default files).
Proj\def	Defaults and standards (e.g. default files).
Proj\lst	Output and log files.
Proj\nc	Output to NC machines
Proj\nest	Nesting parts-menu files.
Proj\plot	Generic post-processor output.
Proj\prg	Batch pipe modeling input schemes
Proj\sch	Structure generation schemes, curved panel schemes

The Surface server holds information about surfaces from Tribon Initial Design.

The License server is a window based server with parallel port or USB connection for the license dongle. It answers otolicense requests from the clients.

The Project server keeps information about where projects are stored .

The Database server will handle a Tribon Native database on any of our supported platforms or Oracle on any of Oracles supported platforms

Depending on local installation this requirement varies with the workload and number of clients. Please contact your hardware supplier for evaluating potential upgrade needs.

It is recommended to use a 3 button mouse when running Tribon, some functions requires all 3 buttons to be available.

A1.3.1 Minimum Server (5 to 40 Users*)

- Minimum 1 GHz Pentium Server with one CPU, possible to upgrade to multiple CPU's.
- 512 MB internal memory or more*
- 12 GB or more Ultra SCSI II HPL disks (10.000 spins per minute) (depends on the amount of data in customer projects)
- Backup unit
- CD-ROM drive
- Monitor
- 10/100 Mbps network connection

Note: With multiple CPU's this configuration will be able to handle up to 60 users simultaneously. Large installations have to be configured upon request due to the possible need for network segmentation, multiple server needs, Raid Disk concept and Robotic backup solutions.

*The use of Oracle as database server might require additional memory

A1.3.2 Recommended Server (5 to 40 Users*)

- 3.0 GHz Intel Xeon DP Server with one CPU, possible to upgrade to multiple CPU's.
- 1 GB internal memory or more*
- 18 GB or more U320 SCSI disks (15.000 spins per minute). The amount of disk depends on the amount of data in customer projects. Preferably RAID level 1+0.
- Backup unit
- CD-ROM drive
- Monitor
- 10/100/1000 Mbps network connection

Note: With multiple CPU's this configuration will be able to handle up to 60 users simultaneously. Large installations have to be configured upon request due to the possible need for network segmentation, multiple server needs, Raid Disk concept and Robotic backup solutions.

*The use of Oracle as database server might require additional memory

A1.3.3 Minimum Client Workstation PC (and Server up to 10 Users)

- Minimum 1 GHz Intel Pentium PC
- 512 MB internal memory or more

- >9 GB Disk (If used as a work-station to run Tribon stand-alone or as a small server the need will be >12GB Disk).
- 32 MB Graphical card with support for Open GL or better
- 19 - 20 inch monitor with 1280 x 1024 pixels resolution
- Backup unit
- CD-ROM drive
- 10/100 Mbps network connection

A1.3.4 Recommended Client Workstation PC (and Server up to 10 Users)

- 3.2 GHz Intel Pentium PC
- 1 GB internal memory or more
- 36 GB SCSI Disk
- NVIDIA Quadro4 980 XGL Graphic card
- 19 - 20 inch monitor with 1280 x 1024 pixels resolution
- Backup unit
- CD-ROM drive
- 10/100/1000 Mbps network connection

A1.3.5 Minimum Client Workstation PC

The following minimum hardware specification is the absolute minimum configuration for Tribon M3. This is not an optimal or efficient configuration but Tribon M3 will work with all expected functionality.

- Intel Pentium II 500 MHz PC
- 256 MB RAM
- 9 GB Hard Disk
- 32 MB Graphical card with support for Open GL or better
- 19 - 20 inch monitor with 1280 x 1024 pixels resolution
- CD ROM drive

A1.3.6 Recommended Client Workstation PC

The following hardware specification is the recommended configuration for Tribon M3.

- HP xw4100 Pentium 4 (HT enabled) 3,2 GHz
- 512-1024 Mb RAM
- 36 Gb 10 000 rpm SCSI
- Monitor P1210 22"
- NVIDIA Quadro4 980 XGL
- 10/100/1000 Mbps network connection

For more Graphic recommendation, see below.

A1.3.7 Graphics

Traditional game cards should be avoided. Only graphic cards with OpenGL support, suited for CAD applications should be used.

Tribon Solutions recommends the use of HP hardware and HP workstation certified graphic cards.

It is further important to make sure, that the latest and appropriate version of the driver for the graphic card is used to get maximum performance and stability.

The following list contains examples of graphic cards tested with Tribon.

Card	Date
Elsa Gloria Synergy II	2000-04-27
Intense 3D Wildcat 4110 PRO	2000-04-27*
NVIDIA Quadro2 Mxr	2001-07-19
NVIDIA Quadro2 PRO	2001-07-19
ATI Fire GL 2	2002-05-01
NVIDIA Quadro4 750 XGL	2002-05-21
3dlabs wildcat VP560	2003-04-01
NVIDIA Quadro4 550 XGL	2003-04-01
NVIDIA Quadro4 980 XGL	2003-04-01
NVIDIA Quadro4 380 XGL	2003-11-01
NVIDIA Quadro FX 2000	2003-08-18

* Only supported in HP Xeon workstations

A1.4 Network

One or several switches 10 - 100 MB Ethernet depending on the number of workstations connected. (TCP/IP Software is normally included in Windows.)

A switched network is vital to obtain maximum performance.

100 base-T switched networks are sufficient for most client workstations.

Large installations require gigabit backbone and gigabit connected servers.

Internet connection, with suitable firewall arrangement, gives the possibility to take advantage of the Tribon Solutions Global Database, Tribon Solutions Corporate and Support Site.

A1.5 Distributed Way of Working

Tribon offers several ways of setting up remote access to Tribon projects. Running Tribon M3 normally means using an installation of Tribon M3 program in the remote location. The table below shows bandwidth requirements depending on number of simultaneous users.

There is a possibility to have clients working over WAN connections with different IP based technologies like DSL, VPN tunnels over Internet, Frame relay, or traditional LAN technology over fibre connections.

If you are planning to use Internet as media for communication then please consider that there is no guaranteed bandwidth over the Internet.

Several parameters are involved when estimating bandwidth demands like:

- What kind of applications, working procedures, numbers of users etc.

- A single user might be able use a 256kbit/s connection working alone on this connection with 2D applications.
- A heavy 3D application user might require a 100Mbit/s connection to achieve good performance and high productivity.

There is no equal bandwidth sharing when connection several clients to a WAN connection. This means that a single client can request a large part of the bandwidth and the performance will appear sluggish for the others.

In a TCP/IP based network it is possible to have project, license, surface and database servers both locally, remotely or mixed.

We encourage our customers to make their own tests to establish a bandwidth suitable for their demands and way of work when considering a WAN implementation. It should not only be possible to work this way but also efficient.

A1.6 Tribon 5 and Tribon M3 Inter-operability

Generally all Tribon projects are upward compatible. This means that projects in Tribon M2, Tribon M1, Tribon 5 or other earlier versions can always be upgraded to Tribon M3 with very few exceptions.

Tribon M3 is not designed to inter-operate with Tribon M2, Tribon M1, Tribon 5 or other earlier versions of Tribon.

Tribon M3 further has the ability to access Tribon databanks residing on some UNIX and OVMS platforms, see the specification *Tribon M3 Basic System*.

Please contact Tribon Solutions if there is a need for more detailed information about interoperability.

A2 Silent Installation of Tribon M3

A2.1 General

This document provides instructions on how to record a Setup.iss script, which can be used for a silent installation of Tribon M3. (A silent installation means that the installer displays no interface, and all options are preselected.) Once the Setup.iss script has been recorded, it can be used in conjunction with the Tribon M3 installer to install Tribon M3 with exactly the same configuration at multiple clients in a network.

DISCLAIMER: Tribon Solutions AB provides these instructions based on standard windows functions. Tribon Solutions AB cannot assist with the creation of a Setup.iss script or troubleshooter issues that arise from an improperly created Setup.iss script.

A2.2 Instruction

To install Tribon M3 on multiple machines using silent installations, the installation process must be recorded on one of the machines and then be 'played back' on all of the other machines.

Recording the Installation Process

The first step in creating the script for a silent installation is recording, or copying, the installation process to be used for the silent installation.

1. Copy the whole Tribon M3 CD to a network disk and make sure each machine that should install Tribon M3 have the same drive letter mapped to this network disk (e.g. P:\).
2. Choose Start->Run, then click Browse.
3. Select the Setup.exe file for Tribon M3 and then click Open. The path-name will appear in the Run dialogue box.
4. Type a space after the path in the Run line, then type the following:
"-r -f1P:\xxSetup.iss". For example, the path could appear as "P:\Setup.exe -r -f1P:\xxSetup.iss". (Exchange xx for whatever suitable.) Click OK.
5. Follow the on-screen instructions, selecting the options that will be used for the silent installation. The installer will create a file named xxSetup.iss in the P:\ folder. The name and location of the script file is given by the "-f1" command line option to Setup.exe.

Note: Please note that the recorded script also must be stored on a network disk to make it accessible when running the silent installation.

A2.2.1 Using the Script

Once the a script file has been recorded that contains recorded installation options, the Tribon M3 installer can be run with the script from another computer.

Create a .bat file that contains the following lines and save it as P:\setup.bat:

```
@echo 'Installing Tribon M3. Please wait...'  
  
P:\Setup.exe -s -f1p:\xxSetup.iss -f2c:\xxSetup.log
```

Run setup.bat on any machine to make a silent installation of Tribon M3. The installer will not display any dialogue boxes indicating its progress during the silent installation.

A2.2.2 Using the Setup.log to Check for Errors

Setup.log is the default name for the silent installation log file, and its default location is Disk1 (in the same folder as Setup.ins). A different name and location for Setup.log can be specified using the -f1 and -f2 switches with Setup.exe (see above).

The Setup.log file contains three sections. The first section, [InstallShield Silent], identifies the version of InstallShield Silent used in the silent installation. It also identifies the files as a log file.

The second section, [Application], identifies the installed application's name and version, and the company name.

The third section, [ResponseResult], contains the result code indicating whether or not the silent installation succeeded. An integer value is assigned to the ResultCode key-name in the [ResponseResult] section. InstallShield places one of the following return values after the ResultCode key-name:

- | | |
|-----|---|
| 0 | Success. |
| -1 | General Error. |
| -2 | Invalid mode. |
| -3 | Required data not found in the Setup.iss file. |
| -4 | Not enough memory available |
| -5 | File does not exist. |
| -6 | Cannot write to the response file. |
| -7 | Unable to write to the log file. |
| -8 | Invalid path to the InstallShield Silent response file. |
| -9 | Not a valid list type (string or number). |
| -10 | Data type is invalid. |
| -11 | Unknown error during setup. |
| -12 | Dialogues are out of order. |
| -51 | Cannot create the specified folder. |
| -52 | Cannot access the specified file or folder. |
| -53 | Invalid option selected. |

A3 Installation of Tribon in Oracle

A3.1 General

Tribon uses two or more Oracle users as *owners* of Tribon structures and data.

One is known as **Tribon System Schema** and is used to administer projects and common structures and data. An installation must have one *Tribon System User* created.

The other is known as **Tribon Project Schema**. An installation will have one or more such users. Each may contain one or more Tribon projects.

A3.2 Before you start

- Init.ora Parameters
Parameter `job_queue_processes` needs to be set to 1 or higher
- Client software
You must have Sql*Net and Sql*Plus installed on the computer from which you installs.
- Authorization
You must be able to logon the target database as SYSDBA.
- Tablespaces
Create tablespaces necessary for use by Tribon schemas.

A3.3 Tribon System Schema Installation

This script creates the Tribon System Schema owner and the initial administrator - TBADMIN - to be used with Tribon Oracle Setup utility.

- Locate the `OraInst` directory
- Start SQLPlus
- Logon as SYSDBA
- Execute script `Create_SysSchema.sql`
- Answer the prompts given
- Check the spool file for errors
- Continue with [Tribon Project Schema Installation](#)

Example

```
D:\>cd OraInstall
C:\>sqlplus /nolog
```

```
SQL*Plus: Release 9.2.0.4.0 - Production on Mon Feb 09
```

09:12:27 2004

Copyright (c) 1982, 2002, Oracle Corporation. All rights reserved.

```
SQL>connect / as sysdba
Connected.
SQL>@Create_SysSchema
...
...
```

A3.4 Tribon Project Schema Installation

This script creates a Tribon Project Schema.

- Locate the `Orainst` directory
- Start SQLPlus
- Logon as Tribon System Schema owner
- Execute script `Create_ProjSchema.sql`
- Answer the prompts given
- Check the spool file for errors