

# *The New Sun™ ONE Studio 7 Software Licensing Model*

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*Technical White Paper*

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# *Introduction*

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With the latest generation of Sun™ ONE Studio 7 (formerly Forte™ Developer) application development products, Sun is introducing a new licensing technology that will replace the FLEXlm licensing model used in previous releases of Sun ONE Studio products.

This paper will discuss the reasons for changing the model, changes to installation and license validation procedures, and comparisons to the old licensing model, and is aimed at system administrators, Sun system engineers, and other IT professionals who have a role in planning, installing, and maintaining Sun ONE Studio 7 products.

The new, serial number-based model provides the following benefits:

- **Standardization**—The new technology provides one licensing model that will work for all Sun ONE Studio 7 software products including Java and native applications.
- **Simplification**—Simplifying the licensing steps for administrators, users, and applications to significantly reduce licensing related problems.
- **Faster Installation**—The new model will enable customers to run supported products “out of the box”, negating the need to contact a License Center.
- **Faster Entitlement Verification**—Because the validation no longer involves communicating with a separate FLEXlm server, the user should see a decrease in the amount of time it takes for the application to start.

## *The New Model*

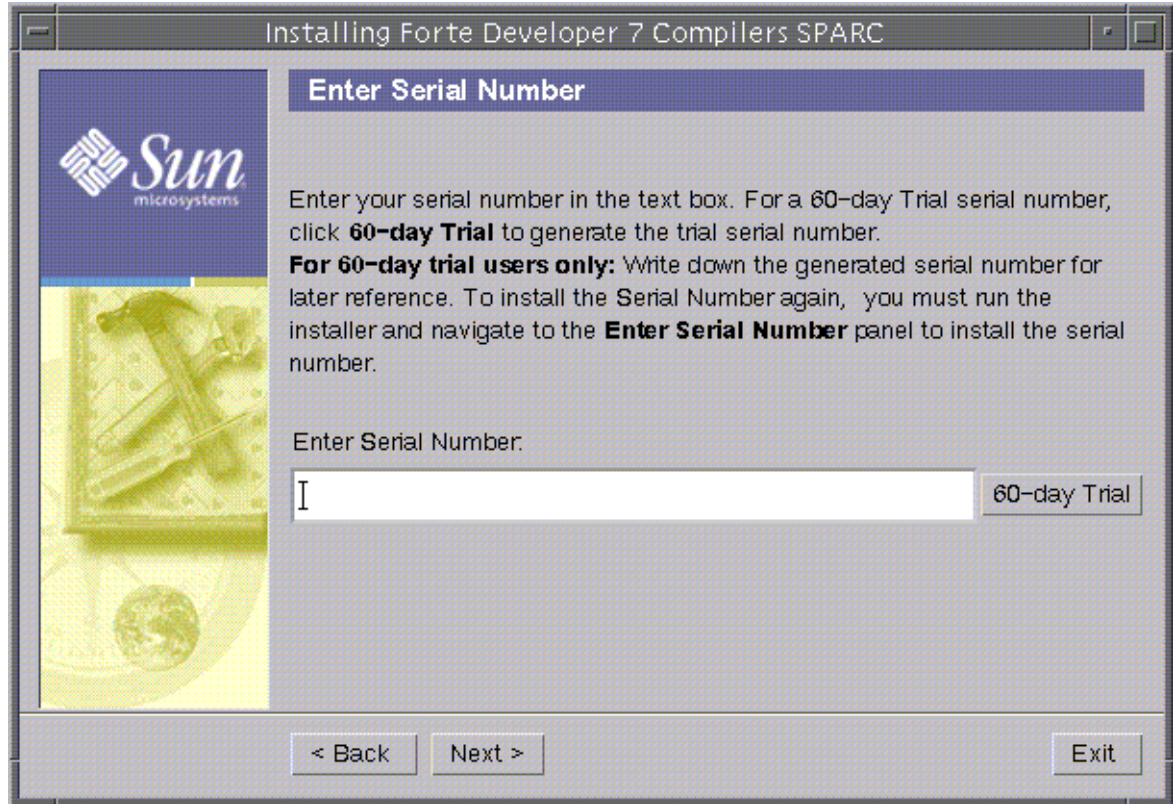
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To meet the goals of standardization, simplification, and faster installation, the new serial number-based model was divided into two parts, installation and validation.

### *Installation*

Installation of Sun ONE Studio 7 software product licenses has been greatly simplified, is much faster than in previous FLEXlm-based versions, and has been standardized. The new model does not require the administrator to install or use separate FLEXlm software or daemons, which means the standalone license installation tool kit has been eliminated as well. The administrator simply inputs the serial number, which is included with the product, during the software installation, as shown in Figure 1. Eliminating the FLEXlm application leaves administrators with one less application to run and maintain.



*Figure 1 Serial Number Installation within the Product Installer*

Licensing of Sun ONE Studio 7 software products is no longer hostid specific, and the license serial number is provided with the product, either in the package, or on the invoice if ordered on the Web. These two significant changes allow customers to use the product “out of the box” because they no longer have to contact the License Center for a license—a process that could take several days. With the new model, customers can generate a try-and-buy license directly from the product installer and use the product immediately upon install. When the trial period comes close to expiring, the product will warn the users and advise them to purchase a permanent license.



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Since licenses are no longer hostid specific, the products can be moved unaltered to a different server, making the licenses much easier to maintain in multi-server environments. The administrator simply uninstalls the product from one server and re-installs the product, with its serial number, on a different server.

The serial number in the new licensing model is 26 characters in length, including dashes. The product code is contained in the first three characters, and the version number code in the second three. A serial number with a version code of '030' relates to a version 3.0 product and will enable any 3.\* version of that product. The third character is ignored, so a version code of '030' will work for V3.2.2 and a version code of '032' will work for V3.0. This means the user will not have to obtain a new license serial number for minor releases (updates) of Sun ONE Studio 7 software.

## *Validation*

Validation of licenses in the new model is also much simpler and easier to use than the previous FLEXlm model. With the new model, there are no longer floating licenses to manage and the user is no longer required to check licenses in and out. When a user starts an application that is licensed with the new model, the application simply verifies that a valid license exists before allowing the user to use the application. Users are still able to access and use the Sun ONE Studio 7 software products remotely, as long as they have access to the server where the application resides.

## Comparing the New and Old Models



The following comparison tables (Tables 1 and 2) contain a brief outline of the differences between the FLEXlm licensing model and the new serial number-based licensing model. A more detailed discussion of some of these differences is provided below the tables.

<b>Installation Features</b>	<b>FLEXlm (as used by Previous Forte Developer 6 software)</b>	<b>New Serial Number Licensing Model</b>
Standalone license installation tool	X	
License installation performed within product installer		X
License validation done prior to license installation		X
Requires installation of additional licensing software package	X	
Licenses tied to hostid	X	



<b>Installation Features</b>	<b>FLEXIm (as used by Previous Forte Developer 6 software)</b>	<b>New Serial Number Licensing Model</b>
Product and license can be moved unaltered to a different server		X
Supports “try and buy” licensing	X	X
Can generate “try and buy” license from product installer		X
Must contact License Center to obtain license	X	

*Table 1 Installation Features Comparison*

<b>Run-time Features</b>	<b>FLEXIm (as used by Previous Forte Developer 6 software)</b>	<b>New Serial Number Licensing Model</b>
Floating Licenses	X	
Node-locked licenses	X	
Domain License	X	
License log file	X	
Runtime license validation	X	X
Major release version enables all minor releases		X
Supports trial license expiration warnings		X

*Table 2 Run-time Features Comparison*

## *Limitations*

Although there are some limitations associated with this model, the advantages of simplicity and ease of administration far outweigh these limitations and the overhead of using FLEXlm.

One trade-off of simplifying the model is that the new model does not perform license counting and therefore does not support floating licenses or license usage tracking. Customers who require these features may use a third-party product from GLOBEtrotter or the Sam Wrap program, or create a spreadsheet to track usage themselves.

Because the new model does not use a separate, complex software package or daemons, it does not support node-locked licensing or domain licenses. The simplification of the new licensing model also negates the need to choose, implement, and maintain a license server configuration (single server, multi-server, or redundant servers).

A final, though slight, limitation of the new model is the need to run the product installer from the product CD when installing new license serial numbers (either additional or permanent licenses installed on a product with a “try and buy” license). The administrator will need to run the product installer until the serial number has been inserted, after which point the administrator can quit the product installer.

## *Compatibility with Older Versions*

Licenses from older versions of Forte software products, such as Forte Developer 6 software, are not compatible with new model licenses. However, different versions may co-exist on the same server. Conversely, licenses from the new model—Sun ONE Studio 7 software—will not enable previous versions.

## *Checking License Information*

Although the new model does not have a separate GUI interface, the administrator can still use the `-xlicinfo` switch or view the log files to report serial number information for administrative purposes.

Example using `-xlicinfo`:

```
% cd /opt/SUNWspro/bin
% cc -xlicinfo
Number of serial numbers found: 1
```



```
Total RTUs available: 1
License file used:
SUNWspro/prod/lib/serial.dat
License tokens accepted by this product: FDT70A
```

```
Serial Number:      FDT70A-MS1C9I9N9-028633209
is valid?:          yes
RTUs:               1
is trial?:          yes
days until expiration:333
expiration data:    08/31/02
%
```

**Example viewing the log files located at /var/sadm/install/logs:**

```
% cd /var/sadm/install/logs
% ls
./
../
Sun_ONE_Studio_7_Compilers_SPARC_install.A03200242
etc.,...

% more
Sun_ONE_Studio_7__Compilers_SPARC_install.A03200242
Serial Number installed at
/opt/SUNWspro/prod/lib/serial.dat: FDT070-M99BDISNU-
028385822
etc.,...
```

## *References*

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Sun Microsystems posts product information in the form of data sheets, specifications, and white papers on its Internet World Wide Web Home page at:  
<http://www.sun.com/>

For product information on Sun ONE Studio 7 software see:  
<http://www.sun.com/software/sundev/>

For online documentation see: <http://docs.sun.com/>



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