Tivoli® IBM Tivoli License Compliance Manager

Version 2.3

Administration

Tivoli® IBM Tivoli License Compliance Manager

IBM

Version 2.3

SC32-1430-03

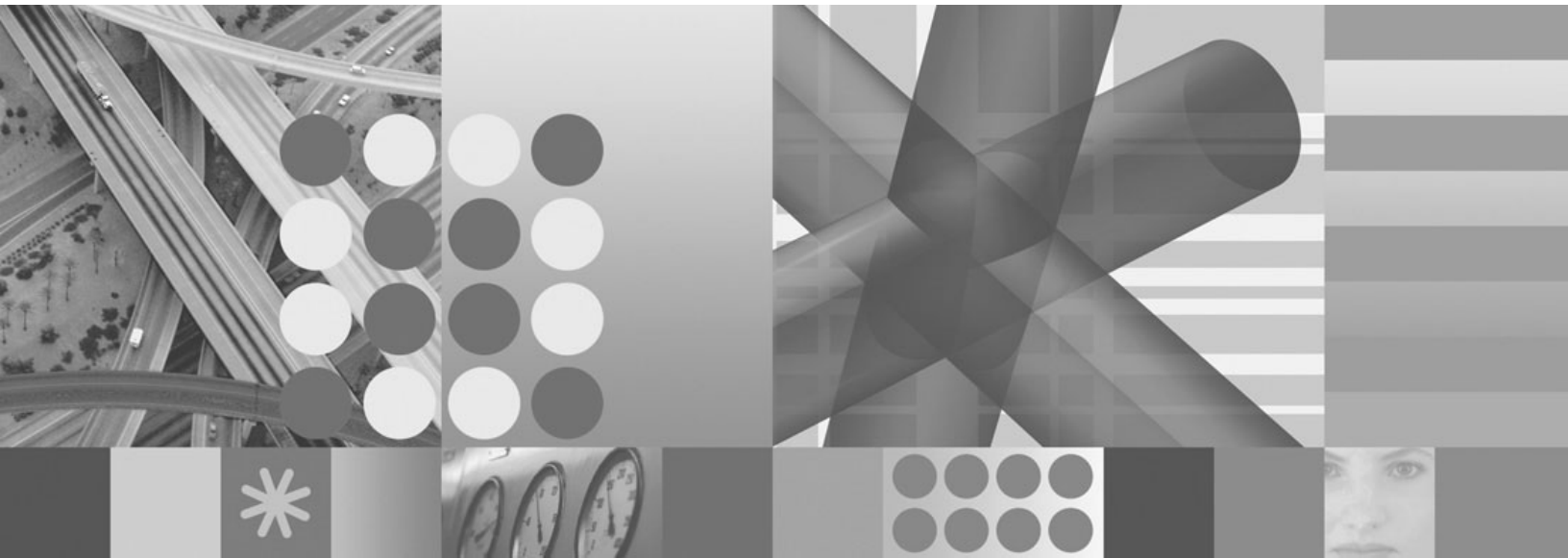**Administration**

> **Note**
>
> Before using this information and the product it supports, read the information under "Notices" on page 163.

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About this guide

This guide describes how you administer IBM® Tivoli® License Compliance Manager.

It contains a general overview of the functions of Tivoli License Compliance Manager and instructions on using the Web User Interface to set up a monitoring infrastructure, define licensing conditions, and produce reports.

Who should read this guide

This guide is intended for anyone who needs to use the Tivoli License Compliance Manager Web UI. This includes:

* Administrators who are responsible for setting up the infrastructure for monitoring license compliance and software use
* License administrators who are responsible for recording the terms and conditions of licenses and for performing compliance audits
* Managers who need information about software use and license availability to assist them in making decisions about license procurement
* Administrators who are responsible for exporting IBM use information in XML format

Publications

This section lists publications in the Tivoli License Compliance Manager library and related documents. It also describes how to access Tivoli publications online and how to order Tivoli publications.

Tivoli License Compliance Manager library

The Tivoli License Compliance Manager library consists of the following books:

* *IBM Tivoli License Compliance Manager: Quick Start Guide*, CF0SBML

  Provides quick start information about Tivoli License Compliance Manager.
* *IBM Tivoli License Compliance Manager: Overview*, SC32-1503

  Provides general information about Tivoli License Compliance Manager.
* *IBM Tivoli License Compliance Manager: Administration*, SC32-1430

  Provides information about how to use Tivoli License Compliance Manager to set up a monitoring infrastructure, define licensing conditions, and produce reports.
* *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*, SC32-1431

  Provides information about planning, installing, and configuring the Tivoli License Compliance Manager product.
* *IBM Tivoli License Compliance Manager: Commands*, SC32-1501

  Provides descriptions of all Tivoli License Compliance Manager commands.
* *IBM Tivoli License Compliance Manager: Data Dictionary*, SC32-1432

  Provides descriptions of the database tables and indexes maintained in the Tivoli License Compliance Manager administration server database.
* *IBM Tivoli License Compliance Manager: Problem Determination*, SC32-9102

Provides Tivoli License Compliance Manager diagnostic information, including messages, traces, event logs, and information about tools and techniques for diagnosing problems.

- *IBM Tivoli License Compliance Manager: Catalog Management*, SC32-1434

  Describes how to use the software catalog management tool to maintain an up-to-date catalog of software products and the signatures that are used to detect their presence and use on monitored computers.

- *IBM Tivoli License Compliance Manager: Security Management*, SC32-1502

  Provides information about the security features of Tivoli License Compliance Manager.

- *IBM Tivoli License Compliance Manager: Release Notes*, SC32-1429

  Provides a summary of changes made in the release, lists the supported operating systems, documents known errors and workarounds, and includes the latest information about the product that could not be included in the main documentation. This document is not delivered on the documentation CD, but is available from the Tivoli Software Information Center. Updated versions of the document might be placed on the Tivoli Software Information Center at any time.

  How to access the Tivoli Software Information Center is described in "Accessing publications online."

Related publications

The following document also provides useful information:

- *IBM DB2 Universal Database: Quick Beginnings for DB2 Servers*, GC09-4836
- http://www.ibm.com/software/webservers/appserv/infocenter.html provides access to WebSphere® Application Server product information.

Accessing terminology online

The *Tivoli Software Glossary* includes definitions for many of the technical terms related to Tivoli software. The *Tivoli Software Glossary* is available at the following Tivoli software library Web site:

http://publib.boulder.ibm.com/tividd/glossary/tivoliglossarymst.htm

The IBM Terminology Web site consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology Web site at the following Web address:

http://www-306.ibm.com/software/globalization/terminology/

Accessing publications online

The Tivoli License Compliance Manager documentation CD contains an information center that includes the publications of the product library, other than the *IBM Tivoli License Compliance Manager: Release Notes*. The format of the publications is PDF and HTML, and they are available in all supported languages. See the readme.txt file to access the information center using a Web browser. The file is in the root directory on the documentation CD.

IBM posts publications for this and all other Tivoli products, as they become available and whenever they are updated, to the Tivoli software information center Web site. Access the Tivoli software information center by first going to the Tivoli software library at the following Web address:

http://www.ibm.com/software/tivoli/library/

Click **Tivoli product manuals**. In the Tivoli Technical Product Documents Alphabetical Listing window, click IBM Tivoli License Compliance Manager to access the product library at the Tivoli software information center.

Note: If you print PDF documents on other than letter-sized paper, set the option in the **File → Print** window that allows Adobe Reader to print letter-sized pages on your local paper.

Ordering publications

You can order many Tivoli publications online at the IBM Publications Center Web site:

www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi

You can also order by telephone by calling one of these numbers:
- In the United States: 800-879-2755
- In Canada: 800-426-4968

In other countries, contact your software account representative to order Tivoli publications.

Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. With this product, you can use assistive technologies to hear and navigate the interface. You can also use the keyboard instead of the mouse to operate all features of the graphical user interface.

This product is operated using a Web browser, which has certain built-in accessibility features, and has been provided with specific shortcut keys for navigating the Web User Interface, starting tasks, and performing toolbar actions.

For additional information, see the Accessibility topic.

Tivoli technical training

For Tivoli technical training information, refer to the IBM Tivoli software training and certification Web site:

http://www.ibm.com/software/tivoli/education

Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:
- "Using IBM Support Assistant" on page 157: You can search across a large collection of known problems, workarounds, Technotes, and other information.
- "Obtaining fixes" on page 157: You can locate the latest fixes that are already available for your product.

- "Contacting IBM Software Support" on page 158: If you still cannot solve your problem, and you need to work with someone from IBM, you can use a variety of ways to contact IBM Software Support.

For more information about these three ways of resolving problems, see Appendix A, "Support information," on page 157

Conventions used in this book

This book uses several conventions for special terms, actions, and operating system-dependent paths.

Typeface conventions

This book uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip:**, and **Operating system considerations**:)
- Column headings in a table
- Keywords and parameters in text

Italic

- Citations (titles of books, diskettes, and CDs)
- Words defined in text
- Emphasis of words (words as words)
- New terms in text
- Variables and values you must provide

`Monospace`

- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

`<text>`   Indicates a variable in a path name. For example, in the path `<INSTALL_DIR>\admin\conf`, `INSTALL_DIR` depends on the location where you have installed a Tivoli License Compliance Manager component, while `\admin\conf` is constant.

Operating system-dependent notation

This book uses the Windows® convention for environment variables and directory notation.

When using the UNIX®, Linux®, and i5/OS® command line you should do the following:

Environment variables
> First verify the correct value for the UNIX, Linux, or i5/OS variable name, because many variables in different operating systems that perform the same task have different names (for example, %TEMP% in Windows is equivalent to $tmp in UNIX and Linux). Then replace **%*Windows_variable*%** with **$*UNIX_variable*** .

File and directory paths
> Replace each backslash (****) with a forward slash (**/**).

Note: If you are using the bash shell on a Windows system, you can use the UNIX conventions.

Chapter 1. Concepts

IBM Tivoli License Compliance Manager is a solution that provides software inventory, use metering, and license allocation services on Windows, UNIX, Linux, and i5/OS operating systems. It can be scaled to meet the needs of large and small organizations, and supports the management of multiple organizations, for example by service providers.

Information about installed software and software use is collected from monitored computers by an agent that can be deployed on a range of operating systems and is reconciled with license information that you define. Information is stored in a central DB2® database and can be accessed using a Web User Interface.

For an overview of the architecture and components of Tivoli License Compliance Manager, refer to *IBM Tivoli License Compliance Manager: Overview*.

The Tivoli License Compliance Manager infrastructure

The infrastructure of Tivoli License Compliance Manager comprises physical and logical components.

Related tasks

Chapter 4, "Managing organizations and administrators," on page 31
These topics describe the functions on the administration server Web UI related to management of administrators and organizations.

Chapter 5, "Managing organization infrastructures," on page 39
These topics provide instructions for creating and managing the components of a Tivoli License Compliance Manager installation for a selected organization.

The physical structure

The physical structure of Tivoli License Compliance Manager is made of three main components: the **administration server**, the **runtime server**, and the **agent**.

You must install these components according to their functions as follows:

Tivoli License Compliance Manager agent
Deploy an agent on each computer that is to be monitored by Tivoli License Compliance Manager. The agent performs the following functions:

- Performs an inventory of the software installed on the computer and forwards this information to the runtime server.
- Identifies which software products are active to build up information about the use of monitored software products on the monitored computer. The agent stores this information in its cache and uploads it to the runtime server at regular, configurable intervals.
- Collects information about software that is running on the monitored computer that is not included in the catalog of software products and adds it to a list of potential signatures. Using the catalog manager, you can process the potential signatures and link them to new or existing products.

Tivoli License Compliance Manager runtime server
Each Tivoli License Compliance Manager installation must have at least

one runtime server. The runtime server runs on WebSphere Application
Server. Each runtime server provides the following facilities:

- A DB2 repository of information required by the agent to support its
  monitoring tasks. This includes the catalog of products to be monitored
  and the schedule for performing software scans. This information is
  downloaded to agents at regular, configurable intervals.
- A DB2 repository of information collected by the agents that are
  connected to the runtime server. This information is uploaded from
  agents, stored in the database, and transmitted to the administration
  server at regular, configurable intervals.
- The capability to generate and send e-mails to provide notification about
  events that have occurred on the server or its agents.
- A command-line interface that you can use to perform system
  management and problem determination tasks.
- A Web UI that you can use to deploy the agents to computers that are to
  be monitored.

Tivoli License Compliance Manager administration server
Each Tivoli License Compliance Manager installation has a single
administration server. The administration server runs on WebSphere
Application Server. The administration server provides the following
facilities:

- A DB2 repository of product, license agreement, license use, installed
  software, and organization information.
- A Web UI that you can use to perform license management and
  administration tasks, and to produce historical reports of license use and
  inventory information over time.
- A command-line interface that you can use to import electronic license
  entitlements, manage complex products, massive data import, and
  system management and problem determination tasks.
- The capability to generate and send e-mails to provide notification when
  license use thresholds are reached or exceeded.
- The capability to reconcile license information defined on the Web UI to
  the software use information received from agents.

For more information on the Tivoli License Compliance Manager components and
for instructions to install them, see *IBM Tivoli License Compliance Manager: Planning,
Installation, and Configuration*.

The logical structure

The Tivoli License Compliance Manager logical hierarchy divides an enterprise
into one or more **organizations**, each of which contains one or more **divisions**.

You can group your whole enterprise into one **organization**, or split it into several.

Each organization can have only one administration server where a centralized
database of licensing, product, historical software use, and inventory information is
maintained. No data can be accumulated across organizations and no licenses can
be shared across organizations. Runtime servers and agents belong to only one
organization.

Divisions are administrative units that give you the ability to perform operations
on a group of agents. For example, installed software scans, which are performed

by the agents, are scheduled at division level, reports can be produced by division, licenses can be limited to selected divisions, and agent self-updates can be scheduled at division level.

Divisions are the lowest structural unit into which an enterprise can be divided. The grouping of agents into divisions should reflect the structure of the organization. For example, there might be a division for each department of an enterprise.

Refer to *IBM Tivoli License Compliance Manager: Overview* for a scenario that illustrates what you need to consider when planning the physical rollout of Tivoli License Compliance Manager and the definition of the logical structure.

Also, refer to *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration* for guidelines and considerations.

Managing software product information

Tivoli License Compliance Manager maintains a catalog in which are stored the details of all the products that can be monitored. This catalog resides on the administration server and a copy of it is periodically downloaded to each runtime server.

You can add entries to the catalog, using information from the following sources:

The potential signatures list
This list is compiled from information collected by the agents about applications that started but could not be monitored because their signatures were not in the catalog. Using the catalog manager, you can add these signatures to the catalog by creating new catalog entries or by assigning signatures to existing entries.

The IBM catalog
The IBM catalog is based on a version of the Tivoli signatures file. You can use the catalog manager to merge the IBM catalog with the existing catalog when you receive a new version from IBM.

For more information about catalogs, potential signatures, and using the catalog manager, see *IBM Tivoli License Compliance Manager: Catalog Management*.

Note: The catalog manager is only available with the full version of Tivoli License Compliance Manager: it is not available with Tivoli License Compliance Manager for IBM Software, which uses a separate catalog that contains signatures only for IBM software products and cannot be altered.

Licensing and product catalog levels

Tivoli License Compliance Manager supports licensing of different hierarchical levels within the product catalog.

The levels are:
- Product
- Version
- Release

This support provides organizations with the ability to choose the catalog level at which a product can be licensed, and the hierarchical level of query when reports

are generated. The hierarchical tree root is the product name, the branches are the product versions, and the leaves are the product releases. Each node of the hierarchy identifies a group of releases that can be managed with a single license, which allows use or installation of all leaves of the sub-hierarchy rooted to that node.

Figure 1 shows, for example, the catalog levels for the Information Management System (IMS™) product.
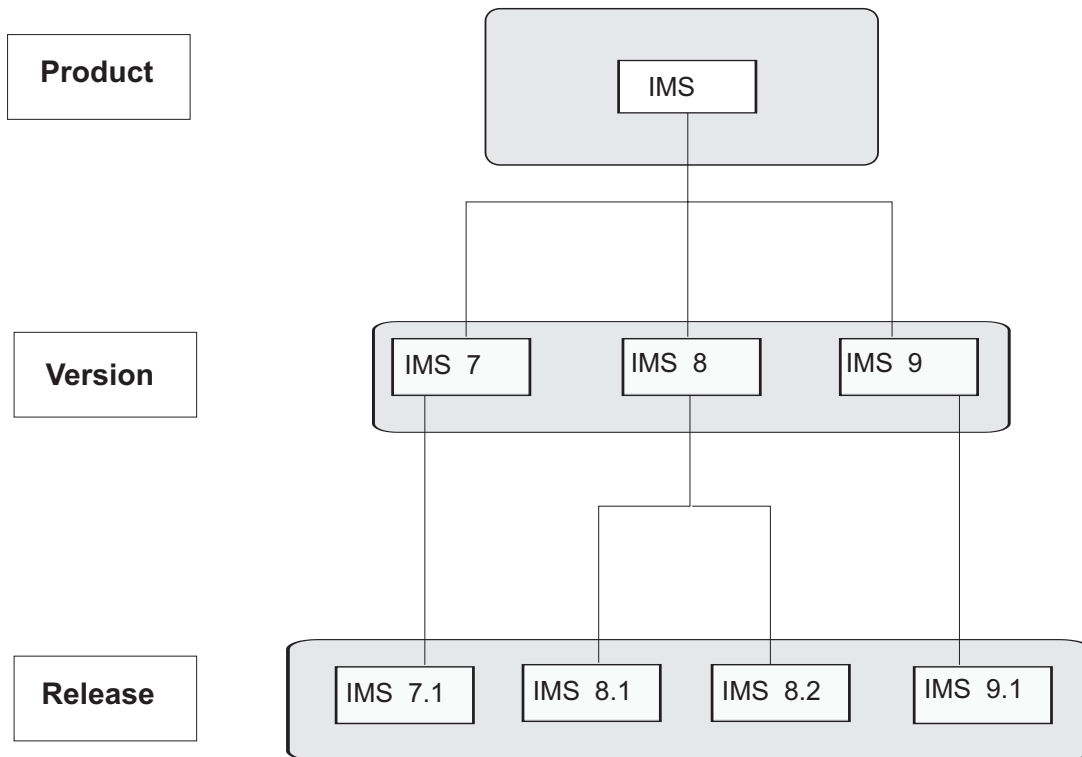
Figure 1. Catalog levels in relation to product, version, and release

The only level in the hierarchy that identifies a physical deliverable is the release level. The product and version levels are logical representations of multiple releases. Within this hierarchical structure, each element that is not a release must have at least one child, and each element that is not a product must have a parent.

Tivoli License Compliance Manager tracks the physical deliverables using software signatures. The software signatures are logically linked to the release level of the hierarchical tree.

A license can be assigned to any node in the hierarchy, and to multiple products of different operating systems and vendors, provided that they are all at the same hierarchical level.

Detecting installation of software products

The Tivoli License Compliance Manager agent detects the installation of software products by searching for specific files, installation registry keys, and Windows registry keys.

The file or the registry key used for this purpose is called a **Software Recognition Signature**.

Detecting use of software products

The Tivoli License Compliance Manager agent detects the use of software products by searching for specific files and unique identifiers.

The file or the unique identifier used for this purpose is called a **Software Monitoring Signature**.

The association between software products and their software recognition and monitoring signatures is made using the catalog, which is part of the Tivoli License Compliance Manager administration server. The same monitoring signature can be associated to multiple software product entities. Recognition signatures can be associated to only one software product entity. A recognition signature can also be used for monitoring if it corresponds to an executable file.

The IBM catalog might include software products for which only the recognition signature is available, in which case Tivoli License Compliance Manager will not detect and report their use. Furthermore, the IBM catalog might include software product components that do not have a valid recognition signature, in which case Tivoli License Compliance Manager will not detect and report their installation. These products have been added to the catalog for IBM report purposes only.

For more information about signatures and using the catalog manager, see *IBM Tivoli License Compliance Manager: Catalog Management*.

Product properties

For any product in the catalog you can enable or disable a set of properties.

The properties are:

Monitoring
When you enable product monitoring, you activate the possibility to produce reports based on product use. The default is **Disabled**. You should only enable product monitoring if you want to collect use statistics for the product to be monitored. When a product is assigned to a use license, the value of this property is automatically modified to **Enabled**.

Discovery
When you enable product discovery, the product can be found by the agent during a software scan. The default is **Enabled** for simple products and **Disabled** for complex products. When a product is assigned to a license, the value of this property is automatically modified to **Enabled**. Note that enabling product monitoring automatically enables product discovery, while disabling product discovery automatically disables product monitoring.

Multi-instance
When you enable the multi-instance property for a product, the Tivoli License Compliance Manager agent is able to detect multiple installations of the same product component on a system. The default is **Disabled**.

Related concepts

"Complex products, simple products, components" on page 6
Tivoli License Compliance Manager can manage software products and their components.

Related tasks

Chapter 6, "Defining product properties," on page 57
For each product in the catalog you can enable or disable a set of properties.

Administering licenses and monitoring software use

You can use Tivoli License Compliance Manager to administer licenses and to monitor the use of software products by recording and reporting their presence and levels of use on monitored nodes.

You define licenses on the administration server using one of the following methods:

- By entering all license information using the Web UI or the CLI
- By providing license information in electronic format

The administration of licenses and monitoring of software depends on the licenses that exist for each product. The information specified for a license includes the quantity of licenses available, and any limitations on the availability of the licenses to specified users and nodes. You can specify that a license is available only to selected users and only on selected monitored nodes.

> **Related tasks**
>
> Chapter 7, "Managing software entitlement and licenses," on page 63
> These topics provide instructions for the tasks involved in creating and maintaining license entitlement information and licenses for products.

Electronic entitlements

You can define licenses by providing information in electronic format.

An electronic entitlement is a machine-readable file that contains information about a software license. It can be used to quickly define licenses for IBM products, avoiding errors that might occur when the definition of license information is done manually using the Web UI.

You can obtain an electronic entitlement from the License management support Web site (at: http://www-5.ibm.com/software/lms). To download an electronic entitlement, you must either be a Passport Advantage designated contact for the site under which the product was licensed or have been delegated access on this Web site by the designated contact. For more information, see the Help function on the License management support Web site.

When you have obtained an electronic entitlement, you can import the information using one of the following methods:

- Using the dialogs of the Web UI: see "Managing licenses" on page 63
- Using the **eeimport** command: see *IBM Tivoli License Compliance Manager: Commands*

Electronic entitlements contain several fields. Some fields are required, for example the unique identifier, the vendor name, and the licensing model. Some fields can be edited at import time while others are protected so that their value cannot be changed.

> **Related tasks**
>
> "Managing licenses" on page 63
> Follow this procedure to create, modify, and delete software licenses.

Complex products, simple products, components

Tivoli License Compliance Manager can manage software products and their components.

A *component* is a software entity, identified through unique signatures, that can be discovered by Tivoli License Compliance Manager during a software scan. A component is *shared* if it is part of at least two products.

A *complex product* is either:
- A product that includes at least one component that is shared with another product, or
- A product that manages other products or components

A *simple product* is both:
- A product that does not include components that are shared with other products, and
- A product that does not manage other products or components

Many of today's software products are licensed as a single complex product but, in reality, they consist of a number of individual components, some of which can be licensed as products in their own right when packaged and distributed separately.

For example, DB2 UDB Enterprise Server Edition is available both as a product on its own, and as part of other complex products, such as DB2 Information Integrator Advanced Edition.

Support for the management of licenses at the complex product level is rather challenging. The following considerations show some of the complexity involved:
- The components that form the complex product can be shared among different products. For example, Tivoli License Compliance Manager includes and uses a DB2 server instance that can also be used by Tivoli Configuration Manager and that, as a consequence, must be associated to both licenses.
- The components that form the complex product are often licensed products in their own right. For example, the DB2 server instance, which is used by Tivoli License Compliance Manager and Tivoli Configuration Manager, can also be used on its own and, in this case, its use must also be associated to the DB2 commercial license.

To manage complex products, Tivoli License Compliance Manager requires input to identify the relationships between components, the complex products the components belong to, and where the components are installed. There are two basic scenarios by which this input can be provided:
- When installing, or planning to install, a complex product, the Software Inventory Administrator defines the association between the components of the product and the agents on which the components are, or will be, installed. See "Defining the mapping of a complex product" on page 93 for details.
- When Tivoli License Compliance Manager discovers (through a software scan) new instances of components that are potentially part of a complex product, and that have not already been assigned to a product, Tivoli License Compliance Manager places the components in the list of unmapped components until the Software Inventory Administrator assigns them to the appropriate product. See "Resolving unmapped components" on page 97 for details. Note that unmapped components do not appear in the software installs snapshot report.

  Related tasks

  Chapter 8, "Managing complex products," on page 93
  These topics provide instructions for managing complex products.

Reporting

Reports of inventory and software use information are available on the administration server.

Tivoli License Compliance Manager includes a set of preconfigured reports you can use to analyze software use and inventory data.

You can view a report using the Web UI, as soon as the report has been generated, or you can choose to have a report generated through batch processing. Batch processing is useful to handle complex reports because the generation of these reports can require a long time. A dedicated task is available to monitor the status of reports requested through batch processing and to download or delete the reports when they are ready.

If you use IBM software products under sub-capacity or full capacity licensing, you are required to produce a report detailing the use or installation of that product to IBM. To generate this type of report refer to Chapter 11, "Exporting IBM Use," on page 135.

Related tasks

Chapter 10, "Reporting software use and installation information," on page 107
These topics provide instructions for producing software use and software inventory reports.

"Exporting reports" on page 131
The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Related information

Chapter 11, "Exporting IBM Use," on page 135
You might be required by the terms under which you license certain IBM software, to generate a report of use of that software and upload it to an IBM Web site.

Event management

The event management component identifies events that require the attention of the system administrator and forwards them to an external e-mail system.

Events are generated on the administration server. These include events regarding the state of the licenses. For example, an event is generated if the number of licenses in use has reached a specified threshold. The event management component is able to determine that an agent is either down or has been uninstalled and can generate and forward an e-mail to alert the person responsible. You can specify which administrators can receive notifications.

Note: If LDAP is used for both authentication and authorization, it is not possible to define profiles and recipients of event notifications at the user level: either all or no users receive notifications. For details on this and more information on the authentication and authorization methods, see *IBM Tivoli License Compliance Manager: Security Management*.

For more information about event management, see *IBM Tivoli License Compliance Manager: Problem Determination*.

Procurement management

Managing procurement in Tivoli License Compliance Manager consists of a set of license management tasks.

For organizations that use large databases to track ordering information for their software products, it is important to have a link between those databases and the license management system that is used to monitor any license agreements. Tivoli License Compliance Manager can be used as a centralized repository for procurement information that is related to the information stored in the software repository of the organization. Business information of licenses can be used to track use of products in terms of the license agreements between organizations and the vendors of the software.

The following topics describe the license types and structures, and how they can be customized by the addition of fields that might be specific to a particular organization.

License types and structures

Several license types have been defined for Tivoli License Compliance Manager.

Table 1 provides a list of the license types. The acronym IPLA stands for IBM Program License Agreement. As shown in the table, there is a distinction between licenses for installation of a product and licenses for use of a product.

License assignment to selected targets and users is performed after the license is created. During license creation, the complete license quota is assigned to the default target type and the administrator then creates distribution quotas by modifying that default.

License assignment to selected users is allowed only for Usage Concurrent Session type of licenses.

Table 1. License types

License type	Grant	Default target type
Usage Concurrent Session	Use	Organization
Usage Concurrent Nodelock	Use	Organization
IPLA Full Capacity (per-processor)	Use	Organization
IPLA Sub-Capacity (per-processor)	Use	Organization
IPLA Value Unit Full Capacity	Use	Organization
IPLA Value Unit Sub-Capacity	Use	Organization
Install Instance	Install	Organization
Install IPLA Full Capacity (per-processor)	Install	Organization
Install IPLA Sub-Capacity (per-processor)	Install	Organization
Install IPLA Value Unit Full Capacity	Install	Organization
Install IPLA Value Unit Sub-Capacity	Install	Organization

All Value Unit licenses (Full Capacity or Sub-Capacity) include a reference to a Processor Value Unit Table whose entries are used to calculate license consumption depending on the type of processor on which the product, assigned to the license, is used or installed. See *IBM Tivoli License Compliance Manager: Overview* for more information on processor value unit licensing.

The regular IBM Use reports produced by Tivoli License Compliance Manager can only include licenses for either the per-processor or the processor value unit category, not for both. Therefore, customers who are required to submit the report must not have IBM products assigned to licenses in both categories.

A **convertlic** command is available on the administration server to convert per-processor licenses to processor value unit licenses so that you can obtain processor value unit licenses and report the use of all products correctly. See *IBM Tivoli License Compliance Manager: Commands* for details.

If you are using Tivoli License Compliance Manager for IBM Software, you will be prevented from creating the processor value unit license until you have either cancelled or converted all your per-processor licenses. If you are using the full commercial version of the Tivoli License Compliance Manager product, you can continue to use the per-processor license types for non-IBM products. Therefore, you will not be prevented from creating the new license because of the existence of per-processor licenses in your environment. However, to ensure accurate reporting, you must make certain that all per-processor licenses for IBM products are converted to processor value unit licenses before you produce the next IBM Use report.

> **Related tasks**
>
> "Assigning a license" on page 73
> Follow this procedure to assign products to a license and, optionally, limit the access to a license to specific divisions, agents, nodes, and users.
>
> "Managing licenses" on page 63
> Follow this procedure to create, modify, and delete software licenses.

Use licenses

Tivoli License Compliance Manager manages use licenses to detect the use of software products.

The following definitions explain the various use license types:

Usage Concurrent Session licenses
> For usage concurrent session licenses, multiple instances of the product run concurrently by the same user, or by different users, on the same agent are counted separately.

Usage Concurrent Nodelock licenses
> For usage concurrent nodelock licenses, multiple instances of the product run concurrently on the same agent are counted as one, regardless of who is using them.

IPLA Full Capacity licenses
> IPLA Full capacity licenses are licenses used on assigned nodes for products that are using the IBM capping rule and follow the full capacity counting rule. The full capacity counting rule states that the processor quantity used by a product running on a node is the number of processors on that node.

IPLA Sub-Capacity licenses
> IPLA Sub-Capacity licenses are licenses used on assigned nodes for products

that are using IBM capping and rounding rules, and follow the Sub-Capacity counting rule. The Sub-Capacity counting rule states that the processor quantity used by a product running on a logical partition (LPAR) is the number of processors available on that partition.

IPLA Value Unit Full Capacity licenses
IPLA Value Unit Full Capacity licenses are licenses used on assigned nodes for products that follow processor value unit licensing. The license use is counted as the highest number of processor value units on the computer during the time that the product is in use.

IPLA Value Unit Sub-Capacity licenses
IPLA Value Unit Sub-Capacity licenses are licenses used on assigned nodes for products that follow processor value unit licensing. The license use is counted as the highest number of processor value units available for the partition on which the product is installed during the time that the product is in use.

Install licenses

Tivoli License Compliance Manager manages install licenses to detect the installation of software products.

The following definitions explain the various install license types:

Install Instance licenses
With install instance licenses, multiple installations of a product on the same agent are counted as one.

Install IPLA Full Capacity licenses
Install IPLA Full Capacity licenses are licenses used on assigned nodes for products that are using the IBM capping rule and follow the full capacity counting rule. The full capacity counting rule states that the processor quantity used by a product installed on a node is the number of processors on that node.

Install IPLA Sub-Capacity licenses
Install IPLA Sub-Capacity licenses are licenses used on assigned nodes for products that are using IBM capping and rounding rules, and follow the Sub-Capacity counting rule. The Sub-Capacity counting rule states that the processor quantity used by a product installed on a logical partition (LPAR) is the number of processors available on that partition.

Install IPLA Value Unit Full Capacity licenses
Install IPLA Value Unit Full Capacity licenses are licenses used on assigned nodes for products that follow processor value unit licensing. The license use is counted as the highest number of processor value units on the computer during the time that the product is installed.

Install IPLA Value Unit Sub-Capacity licenses
Install IPLA Value Unit Sub-Capacity licenses are licenses used on assigned nodes for products that follow processor value unit licensing. The license use is counted as the highest number of processor value units available for the partition on which the product is installed during the time that the product is installed.

License standard fields

Each license includes a set of standard fields that can be defined according to the requirements of the organization to which they relate.

Table 2 on page 12 provides a description of the standard fields of Tivoli License Compliance Manager licenses. For a list of the current custom fields, see "Custom

fields for licenses."

Table 2. License fields

Field	Description
License reference	The reference number that is automatically generated when the license is created.
License name	The name associated with the license when it is first created.
License type	The type of license according to the agreement between the organization and the vendor. See "License types and structures" on page 9 for the possible values.
Terms and conditions	The terms and conditions agreed between the organization and the vendor of the product.
Notes	The additional notes with reference to the license agreement, when applicable.
License key	The software license key, when applicable.
License owner	The person or department that purchased the license.
Start date	The date when the license first becomes valid.
Expiration date	The last day the license is valid.
Total quantity	The total number of licenses that were purchased.
Currency	The currency in which the licenses were purchased.
Total cost	The total cost of the licenses.
Purchase type	Procurement information for the license (unknown, retail, volume, upgrade, OEM).
Order reference	The reference number of the purchase order, when applicable.
Delivery date	The date that the software related to the license is delivered.
Contract number	The reference number to the vendor contract, when applicable.
Processor value unit table version	The version of the processor value unit table used to calculate license consumption.

Custom fields for licenses

You can add fields to the standard set available for Tivoli License Compliance Manager licenses.

The set of custom fields was defined according to current market trends, and might be extended in future releases according to market changes. Any custom fields that are added to the license set are not used by Tivoli License Compliance Manager to record use or compliance of licenses.

Table 3 lists the available additional fields for licenses.

Table 3. Custom fields for licenses

Field	Description
CPU Model	A text field used to indicate the CPU model. It has a maximum length of 40 characters.

Table 3. Custom fields for licenses (continued)

Field	Description
CPU Serial Number	A text field used to record the serial number of the CPU. It has a maximum length of 40 characters.
CPU MIPS	An integer field used to indicate the number of CPU instructions per second.
CPU MSUs	An integer field used to indicate the number of MSUs (millions of service units) for the CPU.
LPAR Name	A text field used to indicate the name of the LPAR. It has a maximum length of 40 characters.
LPAR MIPS	An integer field used to indicate the number of LPAR instructions per second.
LPAR MSUs	An integer field used to indicate the number of MSUs (millions of service units) for the LPAR.
Product Number	A text field used to indicate the reference number for the product. It has a maximum length of 40 characters.
Serial Number	A text field used to indicate the serial number. It has a maximum length of 40 characters.
Maintenance Cost	A money field used to indicate the cost of a maintenance type license.
Upgrade Cost	A money field used to indicate the cost of an upgrade type license.
Cost Center	A text field used to indicate the cost center that purchased the license. It has a maximum length of 60 characters.
Cost Center Owner	A text field used to indicate the cost center entity that purchased the license, such as a person or department. It has a maximum length of 60 characters.
Supply Vendor	A text field used to indicate the supplier of the software. It has a maximum length of 60 characters.
Purchase Vendor	A text field used to indicate the purchaser of the software. It has a maximum length of 60 characters.

Web User Interface

On the administration server Tivoli License Compliance Manager provides a Web UI for the administration of licenses and for creating and maintaining organization infrastructures.

The runtime server also provides a Web UI: this interface can only be used for deploying an agent on a node to be monitored. See *Planning, Installation, and Configuration* for details.

The Web UI has the following parts:

A portfolio
> The portfolio shows the available tasks.

A work area
> Use the work area to supply information needed to complete the task that you selected in the portfolio.

A toolbar

The toolbar contains a number of icons representing actions that are available within all tasks, for example, getting help.

Figure 2 shows a page on the Tivoli License Compliance Manager Web UI and indicates the different parts of the interface.
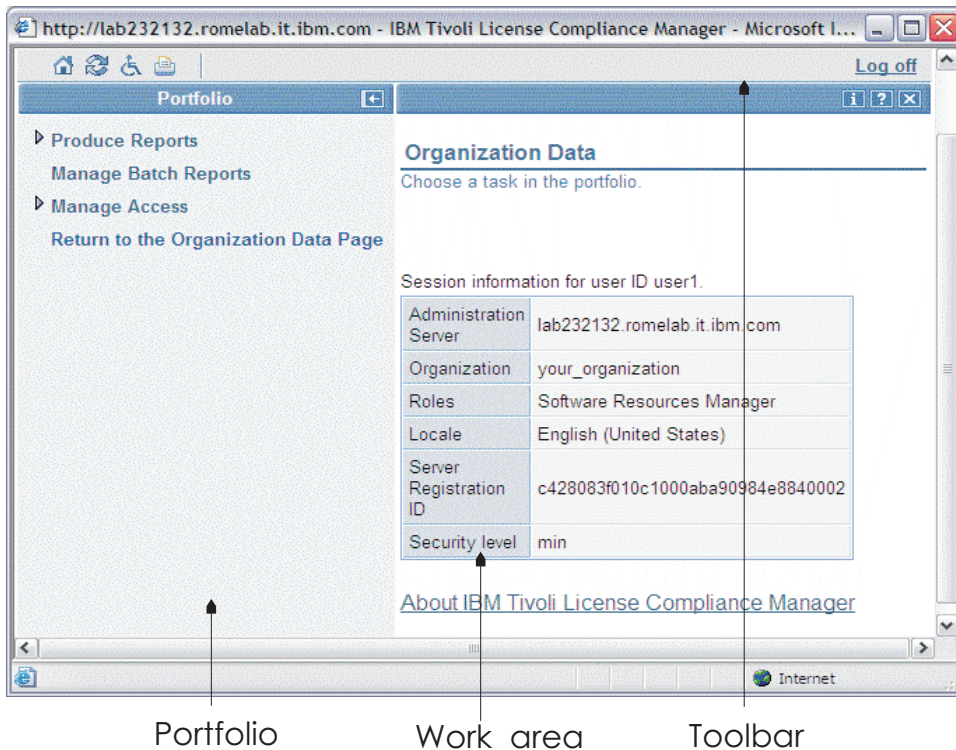

Figure 2. The parts of the Web UI

Related tasks

Chapter 2, "Getting started on the Web UI," on page 21
Tivoli License Compliance Manager provides a Web UI on the administration server.

The portfolio

The portfolio shows a list of all the tasks that are available on the Web UI.

Task groups that include several tasks are indicated by a twistie that you use to expand or collapse the tasks grouped within it. For example, the **Produce Reports** task group includes the installations snapshot, license use trend, product use trend, product use level, unlicensed use, and license compliance reports. When you click a task group, it expands and you can see the individual tasks it includes. When you click a task name, the first dialog of the task opens in the work area.

The work area

The dialogs that you must complete to perform a task appear in the work area of the Web UI.

They consist of controls where you supply or select information, as follows:

Input fields

Use input fields to enter information. These fields can have restrictions on the type of characters that can be used. For example, the product name field shown in Figure 2 on page 14 allows any alphanumeric characters, but an input field that is part of a date requires a numeric input that can be interpreted as a valid date. Furthermore, input fields that require a date do not accept any dates that are prior to 1/1/1970. When you type information for a search (for example, a product name or a license name), you can type part of the information preceded, followed, or enclosed by wildcard characters (%). The information that you type is not case sensitive.

E-mail input fields

Use these fields to enter e-mail information. E-mail input fields adhere to the RFC822 standard.

Telephonic input fields

Use these fields to enter phone and fax numbers. These fields are validated with the following rules:

- Valid characters that are not digits: (,), -, +, space
- Sequences of valid characters that are not allowed: ((,)), (),)(, (+, +),)+, +(", ++, (-, -),)-, -(, --, -+, +-

List boxes

Use list boxes to select from a set of possible values. Lists can be static or dynamic.

Static lists show a set of fixed values. For example, when defining a license, you must choose a target type from one of four possible values.

Dynamic lists are those that show values that are user-defined. For example, a list of divisions includes all the divisions that have been defined for the selected organization. Because dynamic lists can include a large number of items, the list is sometimes truncated to a default maximum of 5 000.

Generally, you can select a single value from static lists, while in a dynamic list you can select multiple items.

Radio buttons

Use radio buttons to choose one of a small group of predefined options.

Check boxes

Use check boxes to select one or more of a group of predefined options.

Table navigation controls

Table navigation controls are standard controls. For example, typing a number in the page x of y field and clicking **Go**, takes you to the relevant table section, or using the arrows moves you forward and backward. You can set the number of rows for a given table to either 6, 15, or 25. The default is 6 rows.

Tree structures

Expand a structure to view detailed information.

Note: Any control that is marked with an asterisk (*) is a required control.

The toolbar

The toolbar shows the available icons and the action performed when you click on an icon.

Table 4 shows the toolbar icons and corresponding actions.

Table 4. Toolbar icons and actions

Icon	Action
	Toggles between the default view where the interface is divided between the portfolio and the work area and a view where the portfolio is hidden.
	Displays the home page on the administration server where you can select a different organization to work with.
	Refreshes the display to show the most recent data.
	Opens the accessibility help window where you can read about keyboard alternatives for navigating the interface and performing actions.
	Prints the current panel.
	Opens the Tivoli License Compliance Manager information where you can see product version and copyright information, as well as session information for the current user, and, when enabled, the privacy policy information.
	Opens the help frame for the current dialog.
	Closes the current task.

Access control management

Access to the Web UI requires authentication of the user credentials and authorization to perform a set of tasks.

Authentication of user credentials
Access to the Web UI requires a valid user ID and password. A password must conform to configurable rules for password length, complexity, duration of validity, and reuse. For details, see *IBM Tivoli License Compliance Manager: Security Management*.

Authorization to perform a set of tasks
Each user ID and password that can be used to log on to the Web UI is linked to at least one profile that defines the role of the user and a privacy policy. Each role has a fixed set of assigned tasks and only these tasks are visible to the user. If more than one profile is assigned to a user, the list of tasks shown in the Web UI portfolio includes the tasks applicable to all assigned profiles.

Tivoli License Compliance Manager can manage authentication and authorization in one of the following ways:

- Users log on using an ID and password defined on the Web UI. Roles are also defined on the Web UI.

- Users log on using an ID and password defined and authenticated on a Lightweight Directory Access Protocol (LDAP) server. Roles are defined on the Web UI.
- Users log on using an ID and password defined and authenticated on an LDAP server. Roles assignment is managed by way of LDAP user groups.

Note: If LDAP is used for both authentication and authorization, it is not possible to define profiles and recipients of event notifications at the user level. For details on this and more information on the authentication and authorization methods, see *IBM Tivoli License Compliance Manager: Security Management*.

Related concepts

"Web UI roles" on page 18
You can use the Web UI according to the type of role your **Super Administrator** defines for you, taking into account that a user can have more than one role within the same organization.

Related tasks

"Defining user profiles" on page 37
Follow this procedure to create or change profiles for an administrator account. This activity cannot be performed if you use LDAP for both authentication and authorization.

"Mapping user roles to LDAP groups" on page 33
Follow this task if you use the Lightweight Directory Access Protocol (LDAP) for both logon authentication and role authorization.

Web UI tasks

You use the Web UI on the administration server to set up organization infrastructures, to administrate licenses, and to produce reports.

You can access the following tasks from the portfolio of the administration server:

Produce Reports
Use this task group to generate reports on installation inventories, software use, use trends, level of use, unlicensed use, and license compliance.

Manage Batch Reports
Use this task to view the status of batch report requests and to manage them.

Manage Licenses
Use this task to create licenses for distribution.

Assign Licenses
Use this task to create license distribution quotas and select targets for a license distribution.

Define Product Properties
Use this task group to define the monitoring, discovery, and multi-instance properties for products in the product catalog.

Schedule Software Scans
Use this task to schedule when to scan a computer for an installation inventory.

Manage Resources
Use this task group to manage divisions, nodes, and application users.

Manage Complex Products
Use this task group to manage complex products, that is, products that include at least one software component that is shared with another product, or products that manage other products or components.

Manage Infrastructure
Use this task group to manage servers and agents.

Manage Organizations
Use this task to create, modify, or delete organizations. If you use LDAP for logon authentication and role authorization, use this task also to map user roles to LDAP groups.

Manage Access
Use this task group to manage accounts or define user profiles. This task is not available if you use LDAP for authentication and authorization.

Define Custom Fields
Use this task to define custom fields for licenses.

Export IBM Use
Use this task to export a report about the use of IBM licensed software.

Return to the Organization Data Page
Use this task to return to the page that displays the data of the organization that you have currently selected.

Web UI roles

You can use the Web UI according to the type of role your **Super Administrator** defines for you, taking into account that a user can have more than one role within the same organization.

On the administration server of a large organization, the following role types can be used:

- **Administrator**

- **Software Resources Manager**
- **Software Inventory Administrator**
- **License and Software Asset Manager**

On the administration server of a small organization, you might just have an Administrator role. The Administrator role is designed for small organizations with one resource to perform all administrative tasks except for managing organizations and accounts. The Super Administrator role is the only role allowed to manage organizations and accounts.

The previous version of Tivoli License Compliance Manager referred to, and used, different roles. As part of the upgrade to this version, the previous roles are converted to the current roles according to the specifications listed in Table 5.

Table 5. Mapping with previous roles

Previous roles	Current roles
Super Administrator	Super Administrator
Administrator	Administrator
Software Resources Manager	Software Resources Manager
System Resources Manager	Software Inventory Administrator
Procurement and Licensing Manager	License and Software Asset Manager
License Administrator	License and Software Asset Manager
Procurement Manager	License and Software Asset Manager

Related information

Chapter 3, "Understanding roles and their tasks," on page 25
This topic defines the roles available in Tivoli License Compliance Manager and the tasks that these roles are allowed to perform.

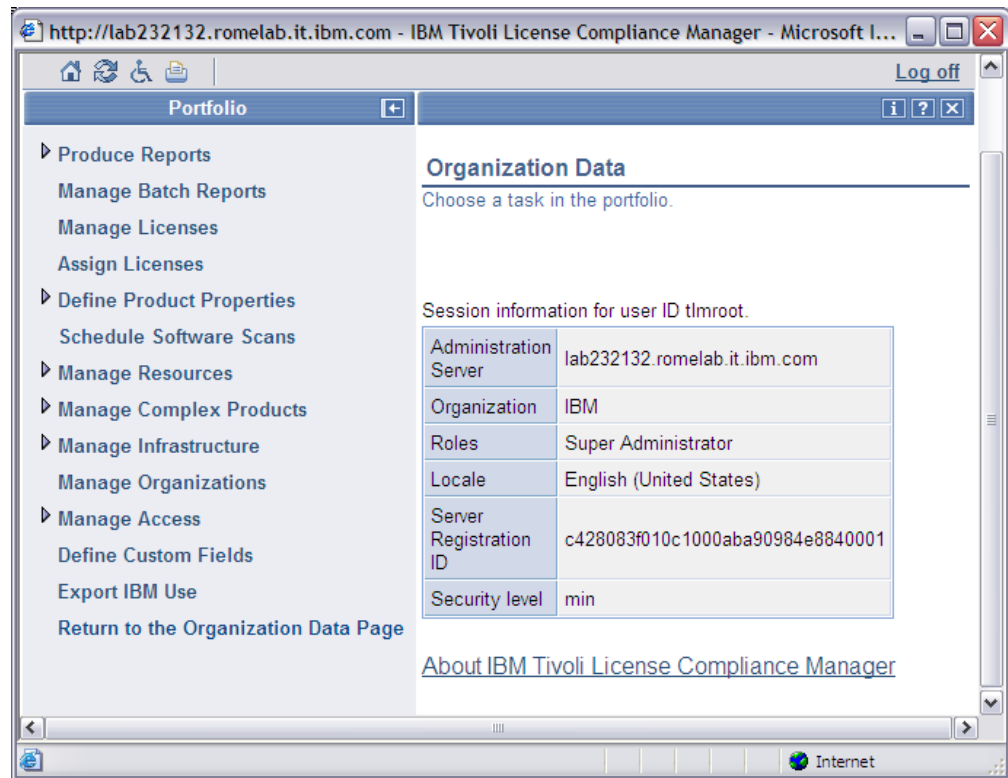# Chapter 2. Getting started on the Web UI

Tivoli License Compliance Manager provides a Web UI on the administration server.

Using this interface, you can request historical reports and perform Tivoli License Compliance Manager system definition and license maintenance tasks.

When you log on to any Tivoli License Compliance Manager server for the first time, use the user ID **tlmroot**, with Super Administrator role, that the installation automatically creates. When you are logged on as **tlmroot** you can create accounts for the administrators who work on the server. The initial password for the **tlmroot** user is **system01**. You should change this on each server as soon as you have logged on.

> **Related concepts**
>
> "Web User Interface" on page 13
> On the administration server Tivoli License Compliance Manager provides a Web UI for the administration of licenses and for creating and maintaining organization infrastructures.
>
> **Related tasks**
>
> "Updating administration account details" on page 35
> Follow this task to change information for an administration account. This activity cannot be performed if you use LDAP for both authentication and authorization.

Browser level and settings

You access the Web UI using a Mozilla or Microsoft® Internet Explorer browser.

You must have one of the following browser versions:

- Internet Explorer 5.5 and above on Windows operating systems.
- Mozilla 1.4, 1.5, 1.6, and 1.7 on Solaris, HP/UX, SUSE LINUX Enterprise Server, Red Hat Enterprise Linux for IA32, SUSE LINUX Enterprise Server for iSeries™ and pSeries®, Red Hat Enterprise Linux for iSeries and pSeries, AIX®, and on Windows operating systems.

  Note: On Mozilla 1.7, you must accept any internet security warnings that appear after you log in.

The default browser settings are acceptable in most cases, but you should make sure that:

- JavaScript™ is enabled.
- The cache is set to automatically refresh.
- Pop-up windows are enabled.
- Any programs that prevent additional browser windows from opening are disabled.

In addition, you should not use browser navigation shortcut keys after the Tivoli License Compliance Manager has opened in kiosk mode, because this causes errors in the product.

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Logging on to the administration server

Follow this task to access the administration server using the Web UI.

1. The address of the page is http://<server name>:<port>/slmadmin/login

   Notes:

   - If you are using a secure (SSL) connection, you must specify https instead of http.
   - If you are using the default port (80 for unsecure connections, 443 for secure connections), you do not need to specify the port in the page address.
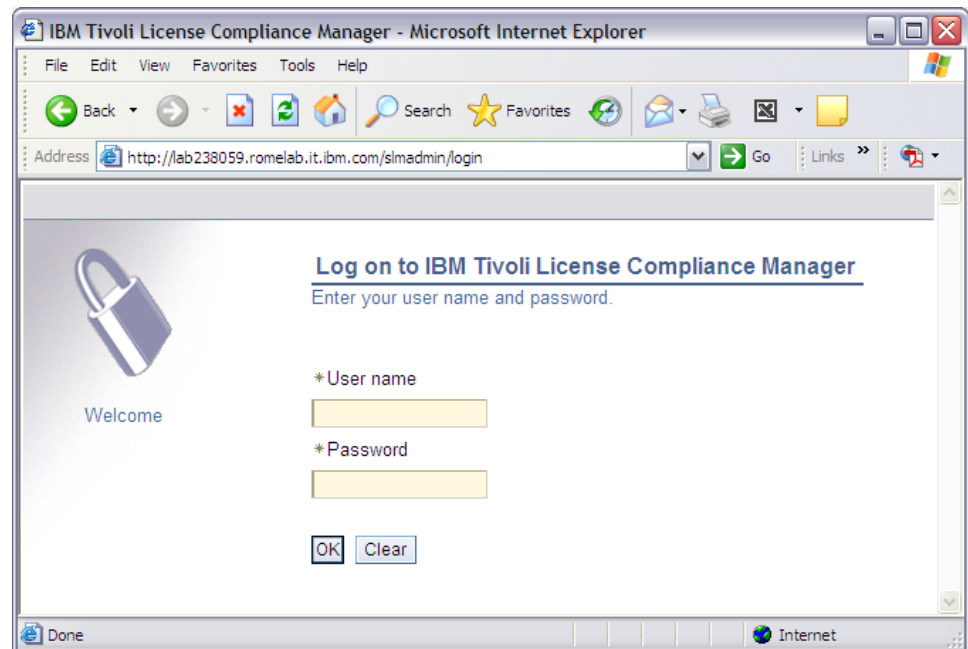
2. Type the **User name** and **Password** of a Tivoli License Compliance Manager administrator and click **OK**.

   You can create administrators on the administration server Web UI when you are logged on as the Super Administrator.

   The Welcome panel opens.
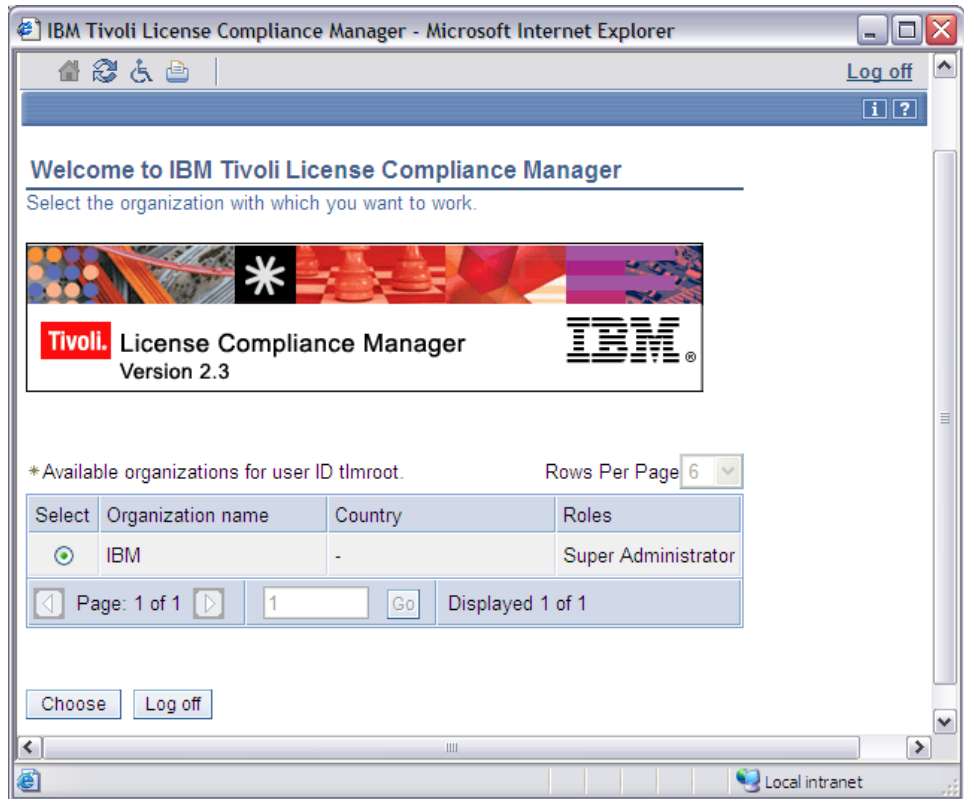
From this panel you select the organization you want to work with and click
Choose. If you are only able to work with one organization, there is only one
in the table. In addition, if no organization exists, you are prompted to create
one the first time you log on to the Web UI.

3. The Organization Data panel opens.
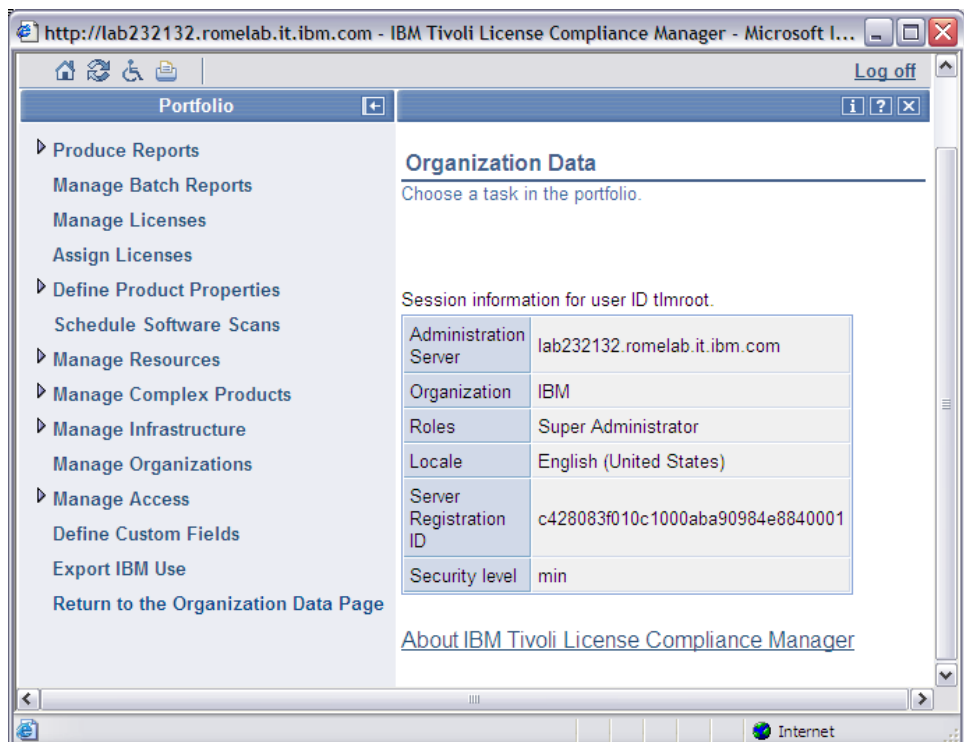
The portfolio on the left of the panel provides a navigable list of the tasks you can perform on the administration server.

The portfolio of the panel differs according to the profile that you have been assigned. For example, the following Organization Data panel shows the portfolio and task groups available for a **Software Resources Manager**:
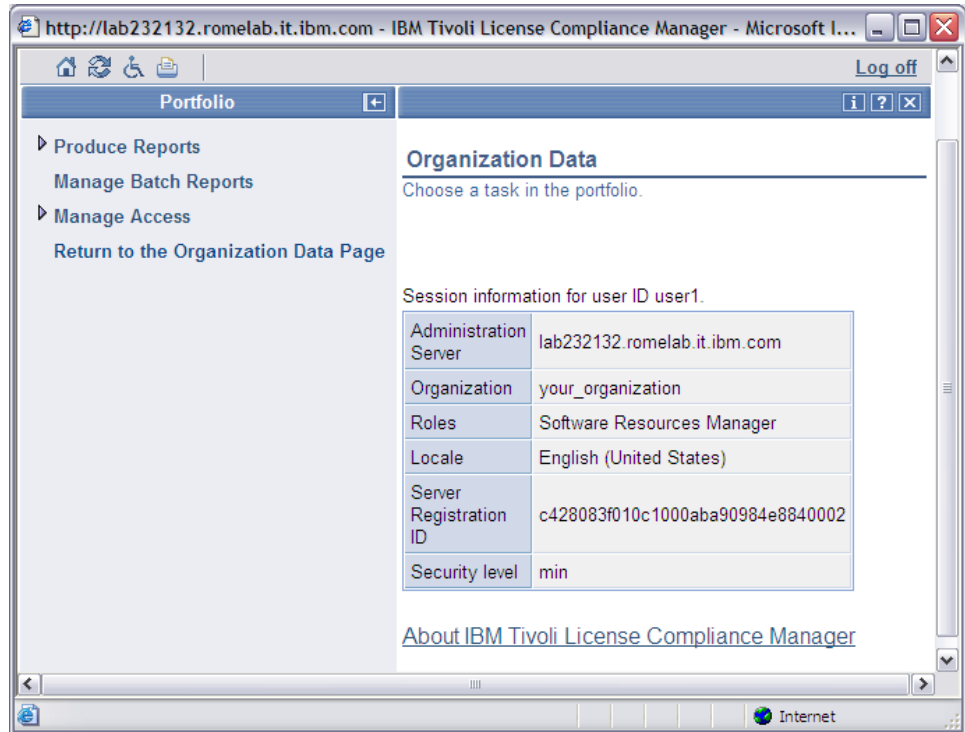
Chapter 3. Understanding roles and their tasks

This topic defines the roles available in Tivoli License Compliance Manager and the tasks that these roles are allowed to perform.

It is important to consider that a user can have more than one role within the same organization.

Super Administrator

A **Super Administrator** is allowed to run any task for any organization, and is the only role allowed to manage organizations and accounts.

Only one account can exist with this role. Such an account (with user name **tlmroot**) is created during the product installation, and it cannot be deleted and its profile cannot be modified.

The following panel shows the portfolio and task groups available for a **Super Administrator**:

Related tasks

Chapter 4, "Managing organizations and administrators," on page 31
These topics describe the functions on the administration server Web UI related to management of administrators and organizations.

Chapter 5, "Managing organization infrastructures," on page 39
These topics provide instructions for creating and managing the components of a Tivoli License Compliance Manager installation for a selected organization.

Chapter 7, "Managing software entitlement and licenses," on page 63
These topics provide instructions for the tasks involved in creating and maintaining license entitlement information and licenses for products.

Chapter 6, "Defining product properties," on page 57
For each product in the catalog you can enable or disable a set of properties.

Chapter 9, "Scheduling a software scan," on page 105
To enable the agents to collect software use information from the computers where they are deployed, they must perform a scan of the installed software.

Chapter 8, "Managing complex products," on page 93
These topics provide instructions for managing complex products.

Chapter 10, "Reporting software use and installation information," on page 107
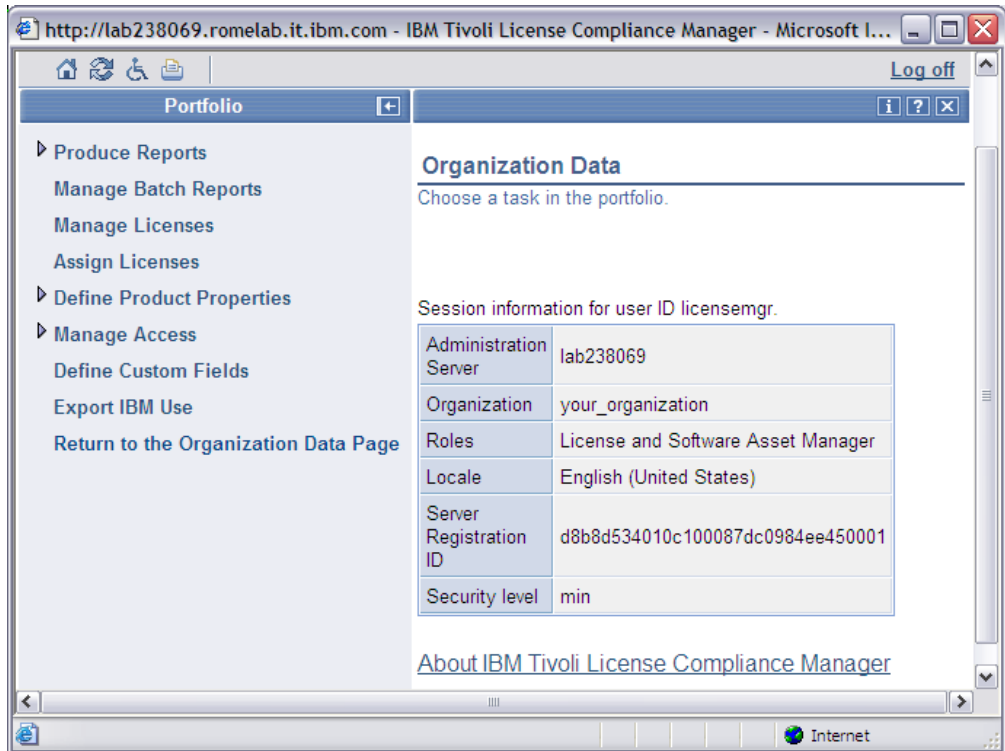These topics provide instructions for producing software use and software inventory reports.

Related information

Chapter 11, "Exporting IBM Use," on page 135
You might be required by the terms under which you license certain IBM software, to generate a report of use of that software and upload it to an IBM Web site.

Administrator

An **Administrator** is allowed to run any task, except managing organizations and accounts.

It is a role intended for small organizations, where a single person is responsible for different activities. It is the responsibility of the administrator to define the topology of the licensing environment, and also to define the users.

The following panel shows the portfolio and task groups available for an **Administrator**:

http://lab232132.romelab.it.ibm.com - IBM Tivoli License Compliance Manager - Microsoft I...

Related tasks

Chapter 5, "Managing organization infrastructures," on page 39
These topics provide instructions for creating and managing the components of a Tivoli License Compliance Manager installation for a selected organization.

Chapter 7, "Managing software entitlement and licenses," on page 63
These topics provide instructions for the tasks involved in creating and maintaining license entitlement information and licenses for products.

Chapter 6, "Defining product properties," on page 57
For each product in the catalog you can enable or disable a set of properties.

Chapter 9, "Scheduling a software scan," on page 105
To enable the agents to collect software use information from the computers where they are deployed, they must perform a scan of the installed software.

Chapter 8, "Managing complex products," on page 93
These topics provide instructions for managing complex products.

Chapter 10, "Reporting software use and installation information," on page 107
These topics provide instructions for producing software use and software inventory reports.

Related information

Chapter 11, "Exporting IBM Use," on page 135
You might be required by the terms under which you license certain IBM software, to generate a report of use of that software and upload it to an IBM Web site.

Software Resources Manager

A **Software Resources Manager** is a user who requires information to support technology decisions and funding requests.

Users with this role are allowed to work with reports.

The following panel shows the portfolio and task groups available for a **Software Resources Manager**:

Related tasks

Chapter 10, "Reporting software use and installation information," on page 107
These topics provide instructions for producing software use and software inventory reports.

Software Inventory Administrator

Software Inventory Administrators ensure that the software inventory is complete, accurate, and up to date.

They ensure that the products that are installed can be accurately monitored and that the total solution is scalable, secure, and easy to maintain. Therefore, a Software Inventory Administrator is allowed to work with software inventory reports, schedule software scans, manage the servers and agents that form the Tivoli License Compliance Manager infrastructure, and define the mapping of components of complex products on monitored computers.

The following panel shows the portfolio and task groups available for a **Software Inventory Administrator**:
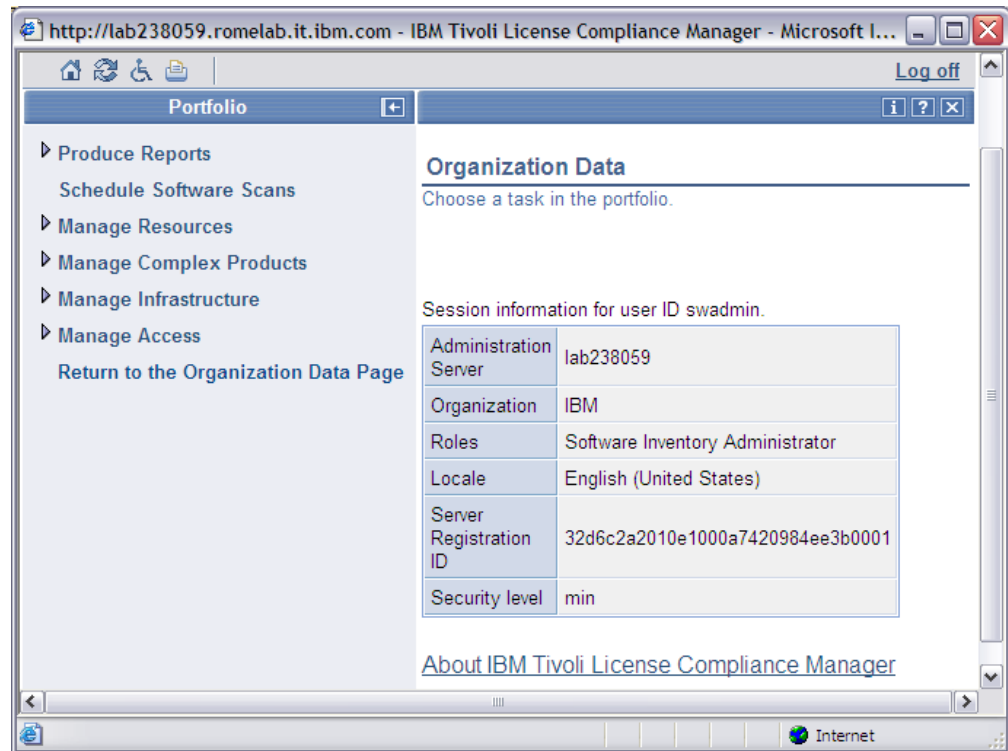
Related tasks

Chapter 5, "Managing organization infrastructures," on page 39
These topics provide instructions for creating and managing the components of a Tivoli License Compliance Manager installation for a selected organization.

Chapter 9, "Scheduling a software scan," on page 105
To enable the agents to collect software use information from the computers where they are deployed, they must perform a scan of the installed software.

Chapter 8, "Managing complex products," on page 93
These topics provide instructions for managing complex products.

Chapter 10, "Reporting software use and installation information," on page 107
These topics provide instructions for producing software use and software inventory reports.

License and Software Asset Manager

The **License and Software Asset Manager** role is responsible for procuring licenses, assigning products to licenses, distributing licenses to targets, and producing reports.

Therefore, a License and Software Asset Manager needs an accurate understanding of the terms and conditions and how to translate these into licensing.

The following panel shows the portfolio and task groups available for a **License and Software Asset Manager**:

Related tasks

"Managing licenses" on page 63
Follow this procedure to create, modify, and delete software licenses.

"Assigning a license" on page 73
Follow this procedure to assign products to a license and, optionally, limit the access to a license to specific divisions, agents, nodes, and users.

Chapter 6, "Defining product properties," on page 57
For each product in the catalog you can enable or disable a set of properties.

Chapter 10, "Reporting software use and installation information," on page 107
These topics provide instructions for producing software use and software inventory reports.

Related information

Chapter 11, "Exporting IBM Use," on page 135
You might be required by the terms under which you license certain IBM software, to generate a report of use of that software and upload it to an IBM Web site.

Chapter 4. Managing organizations and administrators

These topics describe the functions on the administration server Web UI related to management of administrators and organizations.

You use the Web UI to create records for the administrators and organizations, to assign organizations to administrators, and also to define the monitoring structure of an organization.

Each organization is the owner of its Tivoli License Compliance Manager components, licenses, and reports. Whenever you log on to the administration server, you must select an organization with which to work. The Tivoli License Compliance Manager components, licenses, and reports that you can work with are those that belong to the selected organization. Once you have selected an organization, you can choose to work with a different organization by clicking the Home icon on the toolbar.

When you have created an organization and assigned it to an administrator, you can create a monitoring structure for the organization. See Chapter 5, "Managing organization infrastructures," on page 39.

The creation of organizations and administrators is the responsibility of the **Super Administrator**, who performs these tasks using a browser to access the administration server Web UI.

Any role is allowed to change the user password corresponding to its own account.

Related tasks

"Logging on to the administration server" on page 22
Follow this task to access the administration server using the Web UI.

Creating organizations

Follow this procedure to add an organization to the administration server database.

1. In the portfolio, click **Manage Organizations**.
2. Click **Create**.
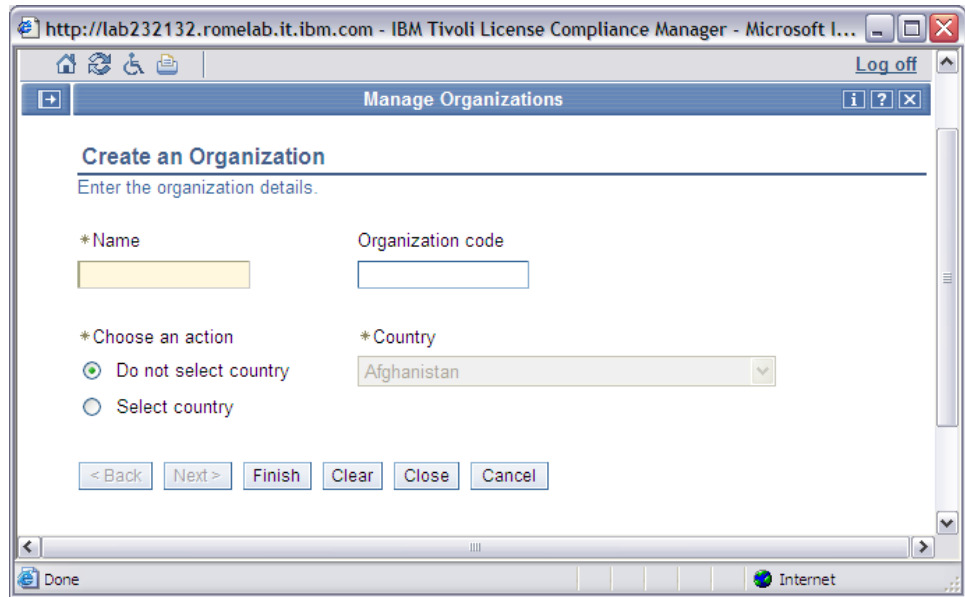
3. Supply the details of an organization whose licenses you are managing.

4. Click **Finish**.

   The organization details are recorded in the administration server database. You can now select this organization and set up the topology of runtime servers, agents, and application users for the organization. See Chapter 5, "Managing organization infrastructures," on page 39.

   Related tasks

   Chapter 5, "Managing organization infrastructures," on page 39
   These topics provide instructions for creating and managing the components of a Tivoli License Compliance Manager installation for a selected organization.

Updating organization details

Follow this task to change information for an organization whose details are recorded on the administration server database.

1. In the portfolio, click **Manage Organizations**.

2. Select the organization you want to update in the **Available organizations** table.

3. Click **Change**.

4. Make the required changes and click **Finish**.

5. You can click **Reset** to return the fields and controls to the state they were in when you opened the panel.

Deleting an organization

Follow this task to delete an organization whose details are recorded on the administration server database.

1. In the portfolio, click **Manage Organizations**.

2. Select the organization you want to delete in the **Available organizations** table.

3. Check the details, and, if this is the correct organization, click **Delete**.

Note: When you delete an organization, you also delete the entire infrastructure of runtime servers, agents, divisions, nodes, end users, and licenses that is associated with the organization and all the data that has been collected for the organization.

Mapping user roles to LDAP groups

Follow this task if you use the Lightweight Directory Access Protocol (LDAP) for both logon authentication and role authorization.

The users do not have an account, nor a profile, defined on the Web UI. Therefore, you need to associate user roles to LDAP groups taking into account that:

- You can map a given role to a unique LDAP group
- You can map different roles to the same LDAP group

To map a user role to an LDAP group, perform the following steps:

1. In the portfolio, click **Manage Organizations**.
2. In the **Available organizations** table, select the organization for which you want to define the mapping .
3. Click **Define roles**.
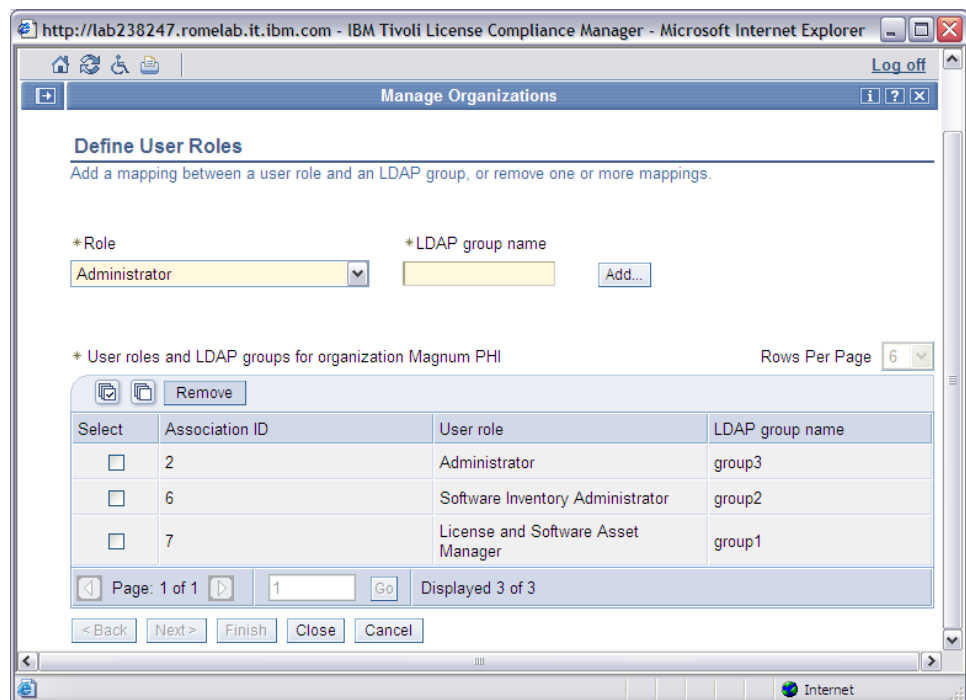
4. Select a user role and type an LDAP group name.
5. Click **Add** to add the selected role and LDAP group to the table.
6. Click **Close**.

If you want to delete the mapping between a role and an LDAP group, select the corresponding row in the table and click **Remove**.

For more information on the authentication and authorization methods, see *IBM Tivoli License Compliance Manager: Security Management*.

Related concepts
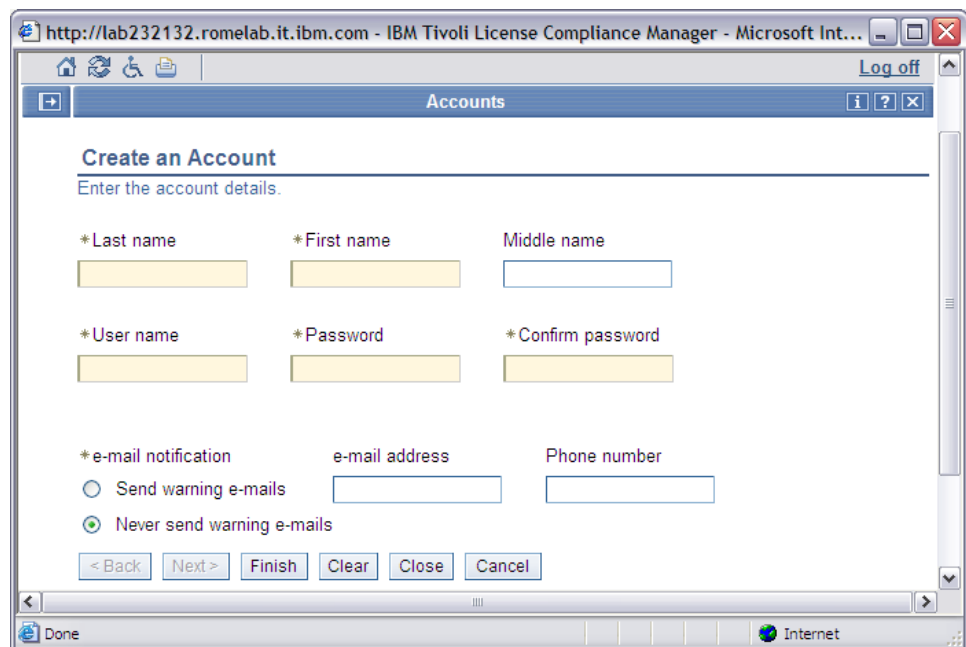
"Access control management" on page 16
Access to the Web UI requires authentication of the user credentials and
authorization to perform a set of tasks.

Adding administrator accounts

Use **Accounts** in the **Manage Access** task group to create accounts for
administrators who are allowed to use the Web UI on the administration server.
This activity cannot be performed if you use LDAP for both authentication and
authorization.

To add an administrator account to the server database, perform the following
steps:

1. In the portfolio, click **Manage Access** and then click **Accounts** in the expanded
   task group.
2. Click **Create**.

3. Supply the details of the user who is to be allowed access to the Web UI. If the
   administrator is to receive notifications, you must specify the e-mail address to
   which the notifications are to be sent. The administrator will receive
   notifications generated by the administration server for events relating to an
   organization that is assigned to the administrator. For Information about the
   different types of event notifications generated by the administration servers,
   see *IBM Tivoli License Compliance Manager: Problem Determination*.

   You should set the password according to the security policy applied to your
   administration server. The password cannot contain blanks, and must be at
   least 8 characters long. Parameters in the system.properties configuration file
   define the rules to be used to determine the validity of a password. The
   Password and Confirm password fields are not available if you use LDAP to
   authenticate user access. For details on password rules and security policies,
   see *IBM Tivoli License Compliance Manager: Security Management*.

4. Click **Finish**.

   The account details are recorded in the server database. The user can now log
   on to the Web UI using the logon name and password that you specified.

Note: The administrator currently has no organizations assigned and no profile to assign a role that defines the administrator's access level and privacy policy. To assign organizations and a role to the administrator, you must set a user profile.

Related tasks

"Updating administration account details"
Follow this task to change information for an administration account. This activity cannot be performed if you use LDAP for both authentication and authorization.

"Defining user profiles" on page 37
Follow this procedure to create or change profiles for an administrator account. This activity cannot be performed if you use LDAP for both authentication and authorization.

Updating administration account details

Follow this task to change information for an administration account. This activity cannot be performed if you use LDAP for both authentication and authorization.

If you are a **Super Administrator**, you can select an existing administration account and perform any of the following tasks:

- Change the account details, for example, the user's logon name, or e-mail address
- Select the organizations that are assigned to the user
- Change the user's password
- Delete the administration account

If you are not a **Super Administrator**, the only information you can change is the password for your own account.

To update an administration account, perform the following steps:

1. In the portfolio, click **Manage Access** and then click **Accounts** in the expanded task group.
2. Select an account from the list and click **Change**.
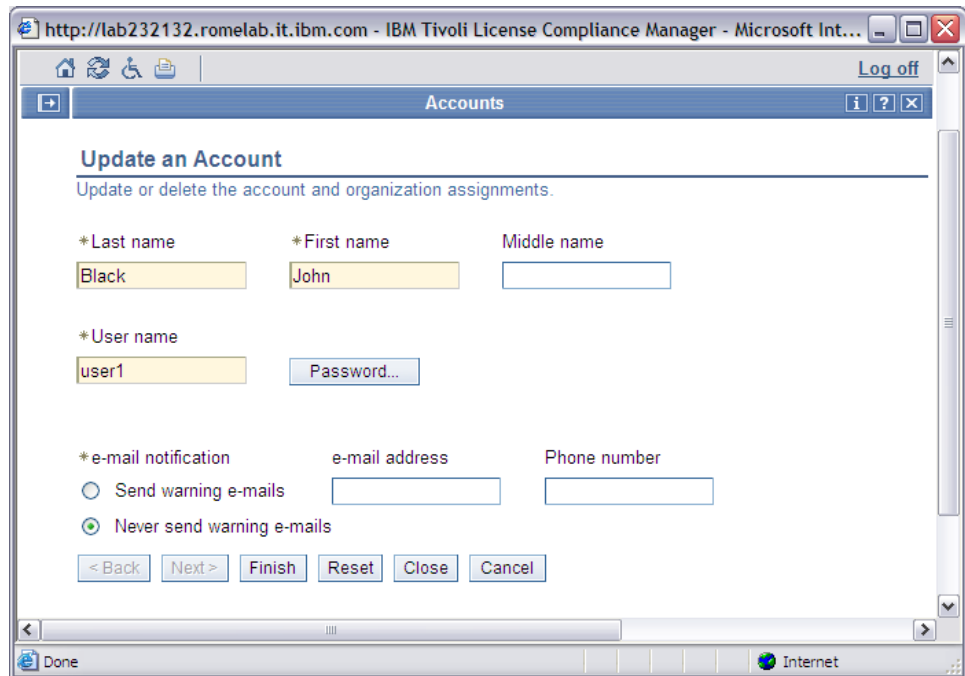
3. You can change the account details and notification status you defined.

4. Click **Reset** to return the fields and controls to the state they were in when you opened the panel.

5. If you want to change the password, click **Password**.

6. Type the current password, then type the new password and confirm it by retyping it. If you are a **Super Administrator** and you are changing the password of a different account, you are not asked to type the current password. You should set the password according to the security policy applied to your administration server. The password cannot contain blanks, and must be at least 8 characters long. Parameters in the system.properties configuration file define the rules to be used to determine the validity of a password. The Password and Confirm password fields are not available if you use LDAP to authenticate user access. For details on password rules and security policies, see *IBM Tivoli License Compliance Manager: Security Management*.

7. Click **Finish**. The Change Password panel closes.

8. When you have made the necessary changes to the account, click **Finish**.

Deleting accounts

Follow this task to delete an administration account. This activity cannot be performed if you use LDAP for both authentication and authorization.

1. In the portfolio, click **Manage Access** and then click **Accounts** in the expanded task group.

2. Select the accounts you want to delete in the **Available accounts** table and click **Delete**.

3. Click **OK** on the confirmation message.

Defining user profiles

Follow this procedure to create or change profiles for an administrator account. This activity cannot be performed if you use LDAP for both authentication and authorization.

When you create or update a profile for a user on the administration server, you first select the account whose profile you want to create or update, then you select the organization with which the user is entitled to work, and finally you set the access levels and the privacy policy for the account. The same account can have more than one access level within the same organization.

To create or update a profile, perform the following steps:

1. In the portfolio, click **Manage Access** and then click **Profiles** in the expanded task group.
2. Select the account whose profile you want to create or change from the list and click **Create profile** or **Change profile**.
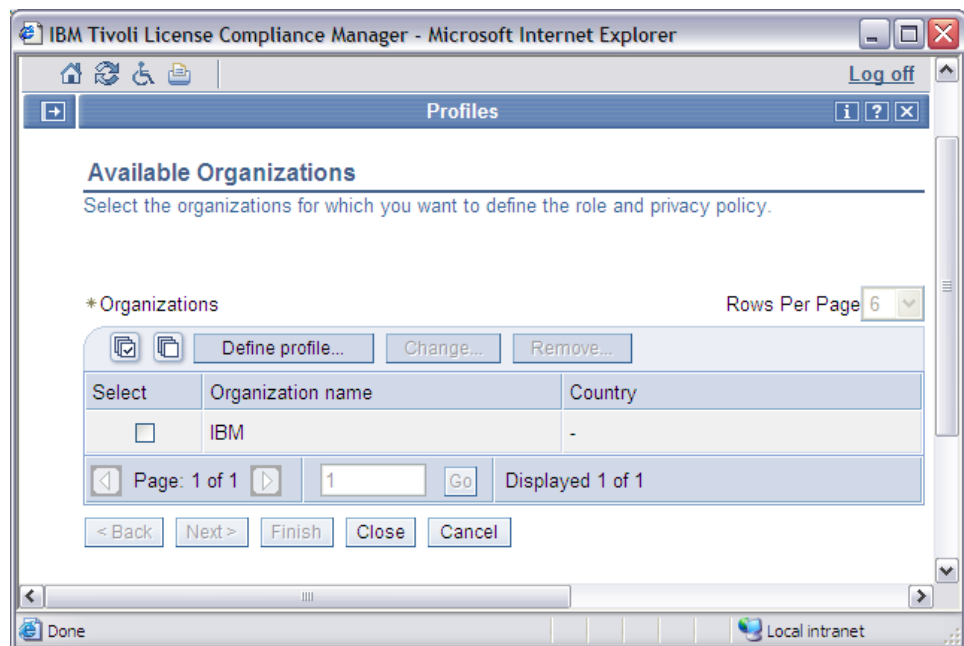
3. Select the organizations that can be managed by this account.
4. To add the profile for the selected organization, click **Define profile**. To change the profile for the selected organization, click **Change**. When the account you are adding has access to more than one organization, and has a different access level for each one, you must define the profiles for those organizations one at a time.
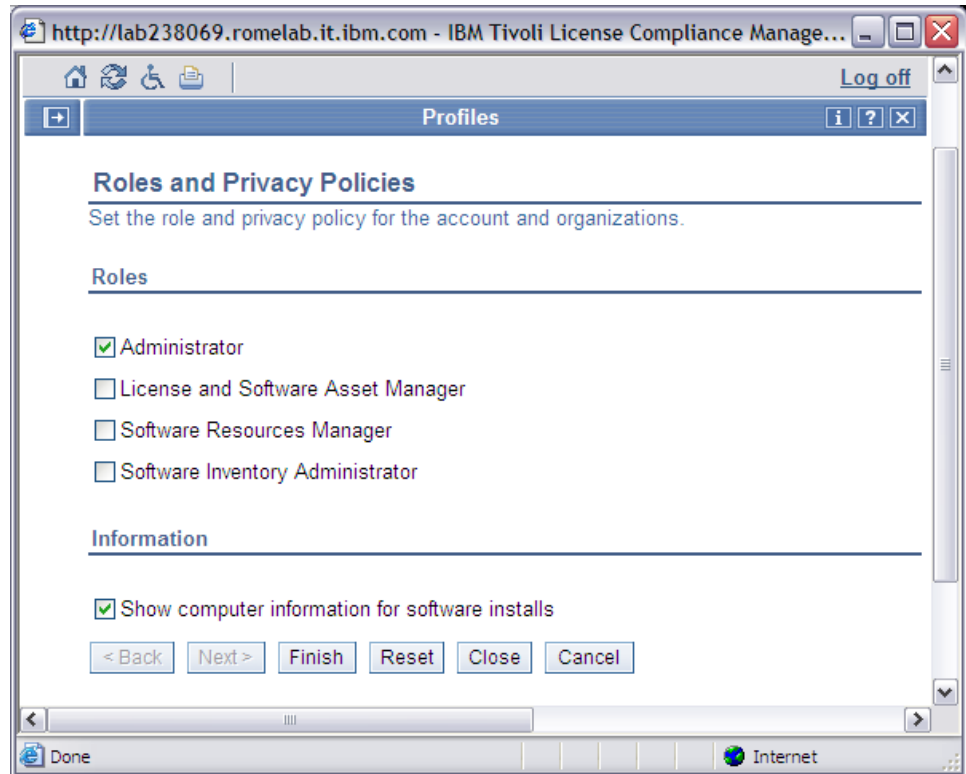
5. Complete this panel as follows:

   Role

   Define the role or roles of the selected account by choosing at least one of the following options:

   - Administrator
   - Software Resources Manager
   - Software Inventory Administrator
   - License and Software Asset Manager

   For a definition of each role, see Chapter 3, "Understanding roles and their tasks," on page 25.

   Information

   Define the privacy policy for the administrator you selected. The only possible value is:

   - Show computer information for software installs

   When you select this value, the search criteria and report data related to nodes and computers is not hidden. Showing computer information is the default setting.

   When Tivoli License Compliance Manager is set to not show computers, the search criteria in reports is hidden to limit report data of defined agents and computers, and the data is queried on a division granularity basis only. Only the **Products** table is displayed in reports, not allowing the possibility of viewing agent and details related to a product.

   You can see more details about the privacy policy by clicking the Information icon on the toolbar.

6. Click **Finish**.

Chapter 5. Managing organization infrastructures

These topics provide instructions for creating and managing the components of a Tivoli License Compliance Manager installation for a selected organization.

There are two types of component:

- Components that form the monitoring structure of an organization.
- Components that record demographic information.

Managing organization infrastructures is the responsibility of the **Administrator** for small organizations, or the **Software Inventory Administrator** for large organizations.

You perform these tasks using a browser to access the Web UI.

All components must belong to an organization whose details have been recorded in the administration server database. You are prompted to select the organization you want to work with when you log on to the administration server. To change the organization during a session, click the **Home** icon on the tool bar and select a different organization from the list of organizations.

When you perform a full installation (that is, when you install an administration server, administration server database, runtime server, and runtime server database) on a single computer, then Tivoli License Compliance Manager creates a default organization, a default division, and a default weekly software scan schedule.

Related tasks

"Creating organizations" on page 31
Follow this procedure to add an organization to the administration server database.

Defining the monitoring structure for an organization

In Tivoli License Compliance Manager, you define a monitoring structure for each organization.

The monitoring structure comprises the following:

Runtime servers
> You install the runtime servers and register them on the administration server to use them.

Agents
> You deploy an agent on each node to be monitored. You must decide on the distribution of agents among the runtime servers to make the most efficient use of resources.

Divisions
> Divisions divide agents into logical groupings. You do not have to group agents into separate divisions. You can create a single division and assign all agents to it. However, having agents grouped makes it possible to

define different frequencies of software scans for different groups, select groups of agents for reporting, and limit access to licenses to a specific group or groups of agents.

Refer to *IBM Tivoli License Compliance Manager: Installation, Planning, and Configuration* for factors and considerations you must take into account when you plan and implement a monitoring structure.

Servers

You define and maintain runtime servers using the **Servers** task, that you access in the portfolio in the **Manage Infrastructure** task group.

To define and maintain runtime servers, you must be logged on as **Administrator** or **Software Inventory Administrator**.

Registering a runtime server

When you install the runtime server component on a machine, you must register the new runtime server on the administration server before it can be used by agents.

To register a runtime server with the administration server, perform the following steps:

1. In the portfolio, click **Manage Infrastructure** and then click **Servers** in the expanded task group.
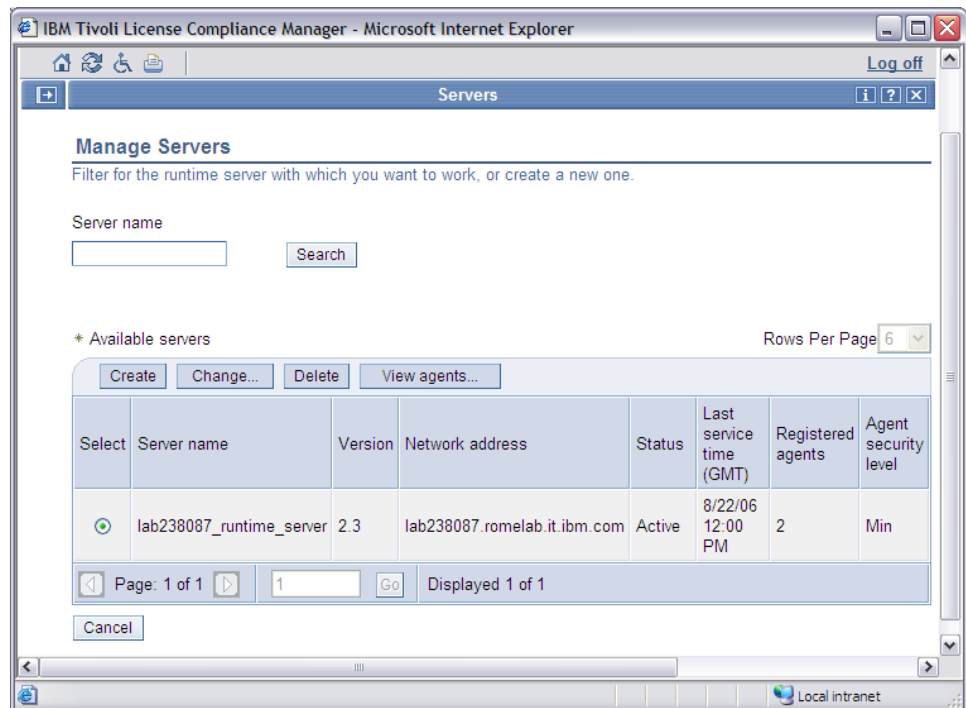
> **Note:** The first time that you select the Manage Servers task, a message is displayed requesting that you create a server. When you click **OK** the Create a Server panel opens.

Search for the server with which you want to work by typing a name in the search field and clicking **Search**.

The **Available servers** table has the following columns:

Select

Select the server or servers with which you want to work.

Server name

The name of the runtime server that was allocated when the server was created, or updated subsequently.

Version

The version of the runtime server.

Network address

The host name or IP address of the runtime server.

Status

Whether the server is active or not.

Last service time (GMT)

The last time the server underwent an outage for maintenance.

Registered agents

The number of agents that are currently connected to the server.

Agent security level

The level of security that the agents use when communicating with the server. Possible values are:

Min SSL security is not enabled

Med SSL security is enabled but no authentication is performed

Max SSL security is enabled and authentication is performed

Unknown

The level of security is unknown

2. Click **Create**.

3. Complete the panel with the requested details. The Create a Server panel contains the following fields:

Name
> Type the name that was allocated to the runtime server when it was installed.

Address
> Type the host name or IP (IPv4 or IPv6) address of the runtime server. An example of IPv6 address is: 2002:957:80fe:238:9:132:238:144. When the runtime server is on a different computer, type the host name of the http server that is used by the runtime server.
>
> **Note:** The network address and port fields are used by agents to contact the runtime server. If you type these fields incorrectly, you will have to redeploy all agents to allow them to communicate properly.

Port number
> Type the number of the port used to communicate with the runtime server.

SSL port number
> If SSL communication is enabled, type the SSL port number used to communicate with the runtime server.

Location
> The physical location of the runtime server machine.

Password
> Type the password that was allocated to the runtime server when it was installed.

Confirm password
> Confirm the password.

Notes:
> - The server name must be exactly the same as the name you specified when you installed the runtime server component on the machine.
> - If the server name or address match those of a server that had already been registered, an error message is shown.
> - The password is used to authenticate communications between the runtime server and the administration server. If the initial password that is registered on the administration server is not exactly the same as the password specified when the runtime server was installed, communications fail.

4. Click **Finish**.

When you submit the server information, the runtime server becomes ready for use the next time it connects to the administration server.

The runtime server fails to connect if one or more of the following occurs:
- The server name does not match the name of any server already registered.
- The server name identifies a server that does not belong to the organization you are working with.
- The password does not match the runtime password that was specified when the server was installed.

If any of these problems occur, an entry is made in the event.log file, which is located on the administration server machine. Refer to the *Problem Determination* guide for details.

Reviewing and changing runtime servers

This topic describes how you can review and modify runtime server data.

It describes the following:
- Updating runtime servers
- Changing runtime server passwords

To review and update a runtime server, perform the following steps:
1. In the portfolio, click **Manage Infrastructure** and then click **Servers** in the expanded task group.
2. You can search for the server with which you want to work by typing its name in the search field and clicking **Search**.
3. Select a server from the list and click **Change**. The details of the selected server are displayed.
4. You can change the **Name**, **Address**, **Port number**, and **SSL Port number** fields. However, you should be aware of the following:
   - The name must be exactly the same as the server name specified when the runtime server was installed on the machine. Therefore, the only change you should make is to correct an error made when the server was originally registered.
   - The address can be a host name or an IP (IPv4 or IPv6) address depending on the network environment. An example of IPv6 address is: 2002:957:80fe:238:9:132:238:144. You should only change the IP address if it was originally entered wrongly, or if the machine on which the server is installed has changed its IP address.
   - The network address and port fields are used by agents to contact the runtime server. If you change either of these values when agents are already deployed, you need to redeploy all agents to enable them to contact the runtime server using the new values.
5. To save your changes, click **Finish**.

Changing the Password:

This topic describes how you change the server password.

To change the server password, perform the following steps:
1. In the **Update a Server** panel click **Password**. The **Change Password** panel opens.
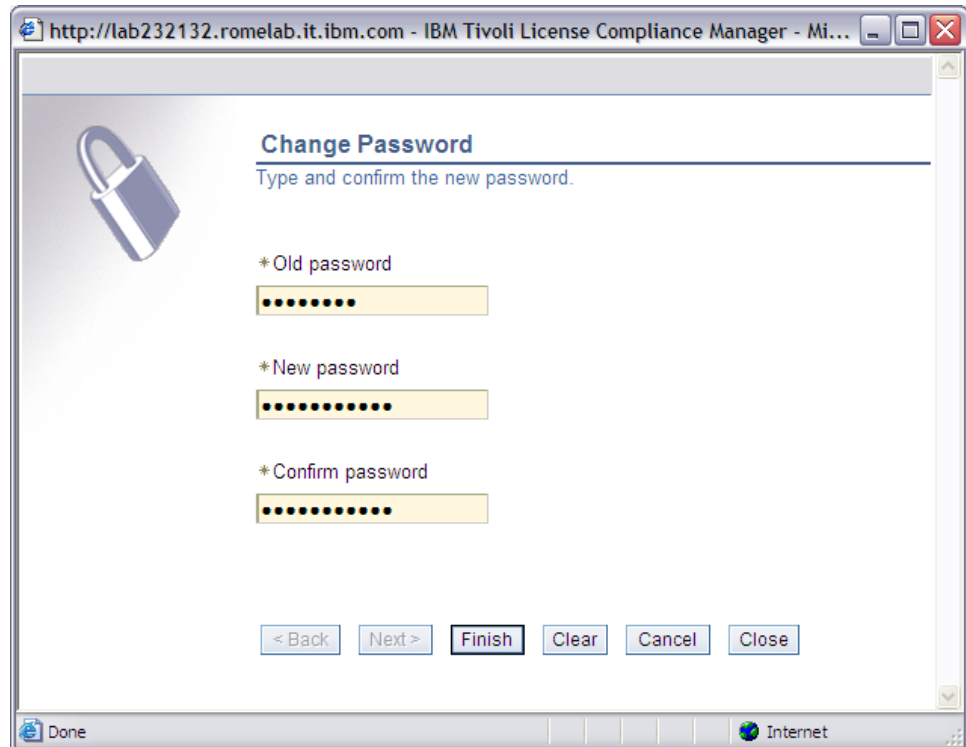
2. Type the current password, type the new password and then confirm it by retyping it. For details on password rules and security policies, see *IBM Tivoli License Compliance Manager: Security Management*

3. Click **Finish**. The Change Password panel closes.

Deleting a server:

This topic describes how you delete a runtime server.

To delete a runtime server, perform the following steps:

1. In the portfolio, click **Manage Infrastructure** and then click **Servers** in the expanded task group.

2. Filter for the server you want to delete according to the name allocated to the server when it was installed.

3. Select the server from the list and click **View agents**.

   The details of the selected server agents are displayed.
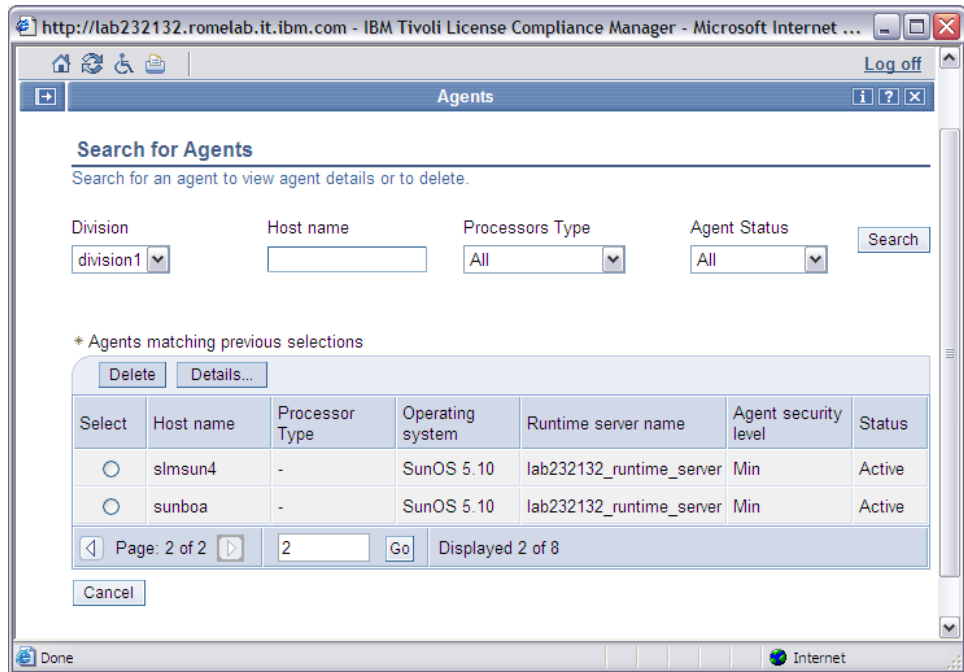
4. Check the agents that are linked to the runtime server that you want to delete. Make a list of those agents that will need to be redeployed after the runtime server has been deleted.
5. Click **Close**.
6. Make sure the correct server is selected in the list and click **Delete**.

Divisions

Divisions are units of an organization and are used to group agents into logical sets.

Each organization must include at least one division, and large organizations can include many divisions. You must create at least one division for an organization before you can deploy agents for that organization.

You define and maintain divisions using the **Divisions** task, that you access in the portfolio under the **Manage Resources** task group.

Adding divisions

This topic describes how you create a division.

To create a division, perform the following steps:

1. In the portfolio, click **Manage Resources** and then click **Divisions** in the expanded task group.
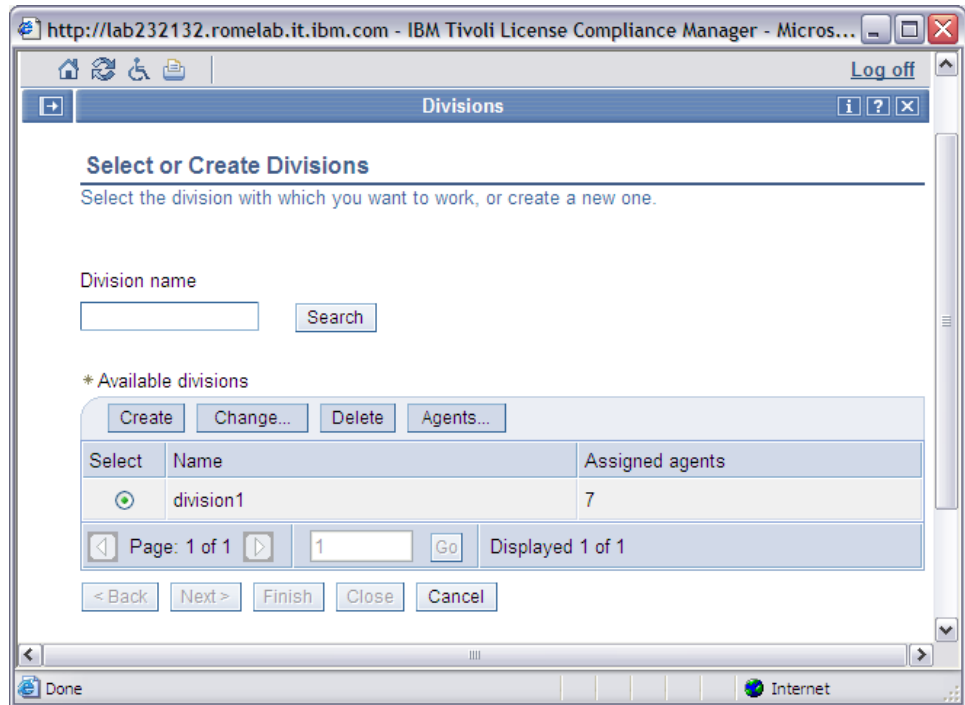
This panel contains the following fields:

Create
Click **Create** to create a new division.

Change
Click **Change** to modify the division you selected in the divisions table.

Delete
Click **Delete** to delete the division you selected in the divisions table.

Agents
Click **Agents** to view the details of the agents of the division you selected.

Select
Select the division with which you want to work.

Name
The name that was given to the division when it was created.

Assigned agents
The number of agents that are assigned to the division.

2. Click **Create**.
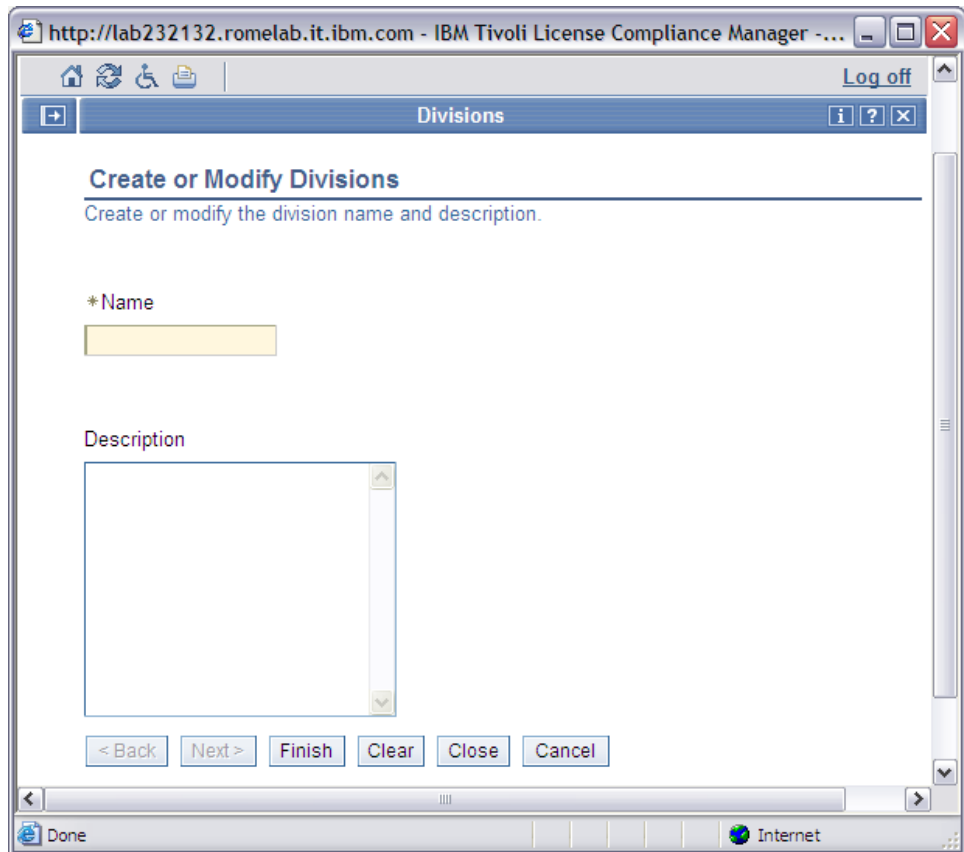
3. Supply the name and description of the division.
4. Click **Finish**.

Reviewing and changing divisions

This topic describes how you can review and change a division.

To review and change a division:

- View the current information for the division, including a list of the agents that are assigned to it.
- Change the name and description of the division.
- Delete a division you no longer want to use. If you delete a division that has agents assigned to it, the agents are also removed.

Perform the following steps:

1. In the portfolio, click **Manage Resources** and then click **Divisions** in the expanded task group.
2. Select a division from the list and click **Change** if you want to modify a division or **Delete** if you want to delete a division.

   Note: Before deleting a division, make a note of all the agents that are deployed in that division so that they can be redeployed.

Agents

You must deploy agents on each node to be monitored. After agents have been deployed on each node, you can use the functions of the administration server to maintain them.

Agent deployment and maintenance involves the following tasks (for details, see *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*):

- Installation
- Redeployment and upgrade
- Review and deletion

Managing agents

You use the **Agents** task in the **Manage Infrastructure** task group to review details of the agents that are deployed and to delete agents when they are no longer needed.

The delete function deletes the record of the agent that is held in the administration server database. It does not remove the agent files from the monitored node. To remove an agent, use the uninstall agent procedure described in the installation chapter of *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

Use the delete agent function when a node is no longer being monitored. You must uninstall the agent from the node before you delete the agent from the database. The recommended procedure for deleting active agents is the following:

1. uninstall the agent
2. wait long enough to ensure that all relevant data for an aggregation has arrived at the administration server (refer to the value of the **maxAggregateUsageAge** parameter in the system.properties file)
3. delete the agent using the Web UI

Note: The delete agent function should not be used before redeploying an agent.

The **Agents matching previous selection** table in the **Search for agents** panel has the following columns:

Select
> Select the agent or agents with which you want to work.

Host name
> The name of the host where the agent is installed.

Processor type
> The type of processor on which the agent runs. The processor's type is Unknown or Incomplete if the information is not available or not entirely available to Tivoli License Compliance Manager. The processor's type is Not Calculated if Tivoli License Compliance Manager still needs to detect the information.

Operating system
> The name of the operating system where the agent is installed.

Runtime server name
> The name of the runtime server with which the agent is registered.

Agent security level
> The type of security that the agents use to communicate with the runtime server. Possible values:

> **Min**   SSL security is not enabled.

> **Med**   SSL security is enabled. No client authentication is performed.

> **Max**   SSL security is enabled. Server and client authentication is performed.

Unknown
> The level of security is unknown.

Status
> The status of the agent. Possible values:

Active The agent is active.

Inactive
> The agent is not active.

Out of synch
> Agents become out of synch when their current inventory data does not reflect the actual software configuration: these agents will be in synch again when a new software scan is run.

Unknown
> The agent's status is unknown. When the status of the agent is unknown for a lengthy period (such as a week), it can be considered inactive.

Pending
> The pending status is specific to agents installed in guest operating systems in an HP Integrity VM environment. In this environment, capacity information for guest operating systems can only be collected by an agent installed in the host operating system. The pending status indicates that capacity information is not yet available because the agent installed in the host operating system has not connected to the server.

Incomplete
> This status is specific to agents that are running in VMware or Microsoft Virtual Server partitioned environments. It indicates that the agent is unable to provide complete capacity information because the CIT enabler script has not been run.

Viewing and deleting agents:

This topic describes how you review agent details and delete agents.

The purpose of the delete function is to remove database entries for agents that have been uninstalled or where the node on which the agent is deployed has been removed from the monitored network.

To review agent details and delete agents, perform the following steps:
1. In the portfolio, click **Manage Infrastructure** and then click **Agents** in the expanded task group.
2. Leave the default to select all agents for the organization, or select the **Division**, type the **Host name** of the computer where the agent is installed, select the **Agent status**, and click **Search**.
3. In the table, select the agent that you want to review and click **Details**.

   The agent details panel opens with details of a single agent.Table 6 on page 50 shows the fields of the node properties:

Table 6. Node properties fields

Field	Description
Node name	The name of the node where the agent is installed. The node name is generated by the system and cannot be modified by the user.
Node tag	The tag of the node (also known as computer label) that was assigned to the node.
Capacity	The capacity of the node where the agent is installed.
Last capacity update date	The date when the node capacity was last updated.
Processor manufacturer	The vendor who produces the processor.
Processor family	The family of the processor. For example, Pentium 4.
Processor type	The type of processor in terms of number of cores.
Processor model	The model of processor.

Table 7 shows the fields of the agent properties:

Table 7. Agent properties fields

Field	Description
Agent name	The name of the agent. It is the same as the host name of the computer where the agent is installed.
Version	The Tivoli License Compliance Manager version of the agent.
Runtime server name	The name of the runtime server to which the agent belongs.
Division name	The name of the division to which the agent belongs.
OS name and version	The name and version of the operating system on which the agent is installed.
Agent security level	The type of security that the agent uses to communicate with the runtime server.
Last scan time (GMT)	The last time a scan was performed on the agent in GMT.
IP address	The IP address of the host computer where the agent is installed.
Custom data 1	A text string for user defined data.
Custom data 2	A text string for user defined data.
Custom data 3	A text string for user defined data.

Review the agent details and click **Close**.

4. To delete the agent whose details you have reviewed, select the agent in the table and click **Delete**.

Managing nodes and application users

You can store information in the administration server database about the organization nodes that are to be monitored and about the users who can start applications on the nodes. Using this information, Tivoli License Compliance Manager can restrict access to licenses to specified users or nodes.

Nodes

A node is a computer that can be monitored when a Tivoli License Manager agent is deployed on it.

You use the **Nodes** task in the **Manage Resources** task group to view details of nodes within the organization's network or to modify previously created nodes.

Note: When an agent is deployed on a node for which there is no entry in the administration server database, Tivoli License Compliance Manager automatically creates a new node record.

Reviewing and changing nodes

This topic describes how you can review and change node information.

You use the **Manage Resources** task to do the following:
- Change the details of nodes that are recorded on the administration server database.
- View information about nodes and the agents that are deployed on them.

To update an existing node, perform the following steps:

1. In the portfolio, click **Manage Resources** and click **Nodes** in the expanded task group.

The **Nodes with entered tag** table consists of the following:

Change

Select a node in the table and click **Change** to modify it.

View agents

Select a node in the table and click **View agents** to view the agents.

Select

Select the node with which you want to work.

Node tag

The tag of the computer (also known as computer label) where the node is installed. The node tag was allocated to the node when the agent was deployed

Name

The name of the node that is generated by the system using information obtained from the computer where the agent is deployed. You cannot modify the node name information. It is this value that the agent deployment process attempts to match when it looks for a node entry in the administration server database for the target node of the deployment. If it does not find a match, it creates a new entry.

Capacity

The capacity of the node.

Hardware platform

The hardware platform of the computer where the node is installed.

Location

The physical location of the node.

Registered agents

The number of agents that are registered on the node.

2. Filter the nodes with which you want to work using the node tags field, or the nodes status field, in the Search for Nodes panel.
3. Click **Search**.
4. Select the node and click **Change**.
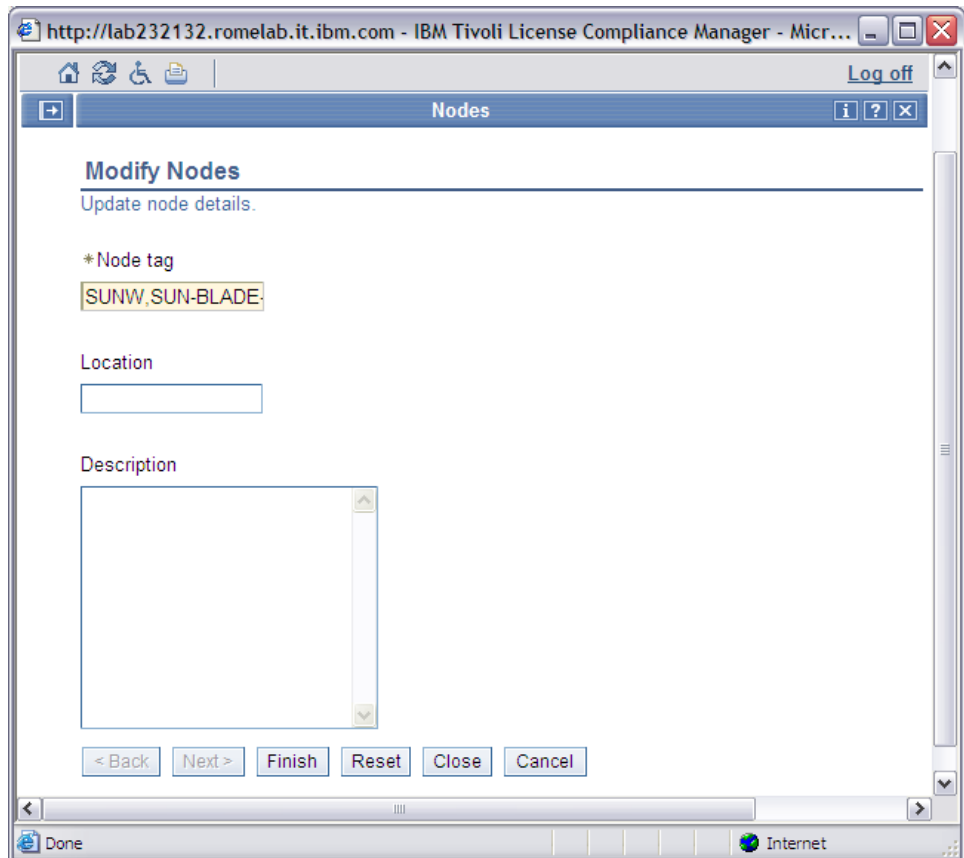
Complete the panel as follows:

Node tag
Type the node tag (also known as computer label) of the computer where the agent is installed. This information is then propagated to the agent.

Location
Type the physical location of the node.

Description
Type any descriptive text.

5. Click **Finish** to apply your changes.

Application users

Application users are the users of the software applications of products. You can create users according to organizations and divisions. You register application users in the administration server database to restrict licenses to specified users.

You define and maintain application users using the **Application Users** task in the **Manage Resources** task group.

Adding users

This topic describes how you add an application user to the administration server database.

To add a user to the database, perform the following steps:

1. In the portfolio, click **Application Users** in the **Manage Resources** task group.
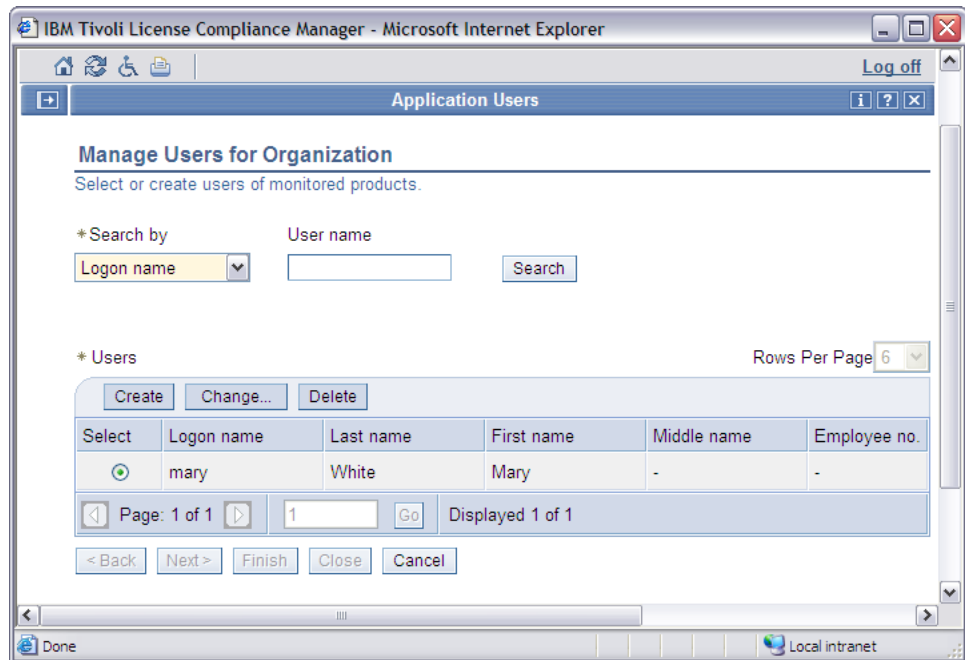
The **Users** table includes the following buttons and information:

Create
Click **Create** to create a new application user.

Change
Select a user in the table and click **Change** to modify an existing application user.

Delete
Select a user in the table and click **Delete** to delete an application user.

Select
Select the user or users with which you want to work.

Logon name
The logon name of the user. It must be the same as the name known by the agent. For Windows operating systems this is computer\user name, where computer is the host name of the computer where the agent is installed. For UNIX and Linux operating systems this is the **user name**. On all operating systems, the name is case sensitive.

Last name
The last name of the user.

First name
The first name of the user.

Middle name
The middle name of the user.

Employee no.
The employee number of the user.

2. Click **Create**.
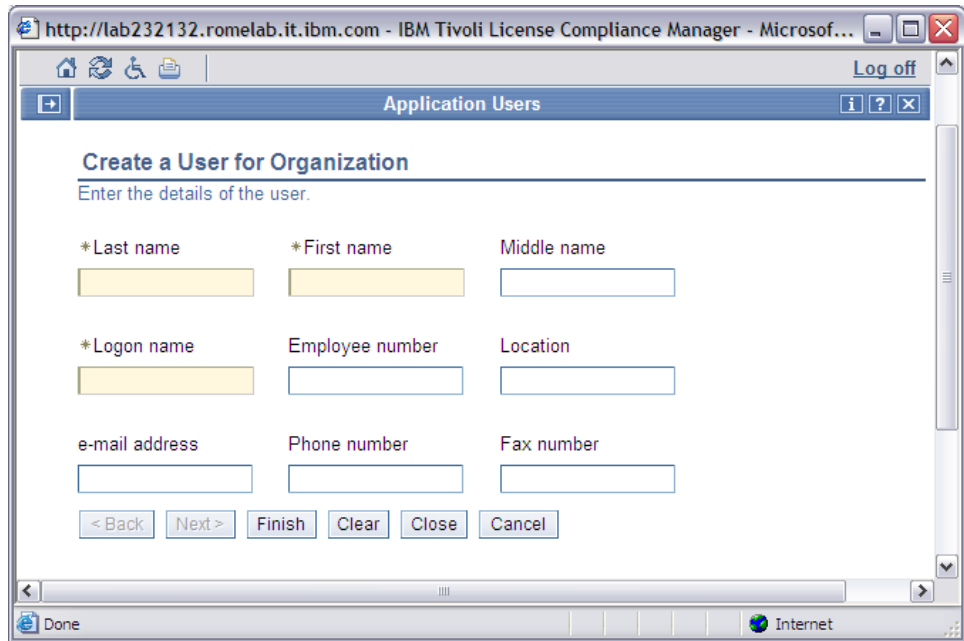
3. Supply the details of a user who has access to one or more of the monitored nodes in the network of the currently selected organization.

4. Click **Finish**.

   The user details are recorded in the administration server database. The user can now be specified when you define user distribution settings for a license if you want to limit access to selected users. When you are defining distribution settings, only those users you created with a logon name can be browsed and added to the allowed users group of a license.

Reviewing and deleting users

Follow this procedure to change or delete information for an application user whose details are recorded on the administration server database.

Perform the following steps:

1. In the portfolio, click **Manage Resources** and then click **Application Users** in the expanded task group.

2. Under the **User search criteria** you can limit the number of users available for selection in the user table.

   To do this, from the drop-down list, select **Last name**, **Logon name**, or **Employee number**. Type a string in the field relevant to what you selected in the drop-down list, for example, select **Last Name** and type Smith to select all users with the last name Smith.

   Leave the **User search criteria** field unchanged to select all users.

3. Select the user you want to delete and click **Delete**.

Chapter 6. Defining product properties

For each product in the catalog you can enable or disable a set of properties.

The properties are:

Monitoring
When you enable product monitoring, you activate the possibility to produce reports based on product use. The default is **Disabled**. You should only enable product monitoring if you want to collect use statistics for the product to be monitored. When a product is assigned to a use license, the value of this property is automatically modified to **Enabled**.

Discovery
When you enable product discovery, the product can be found by the agent during a software scan. The default is **Enabled** for simple products and **Disabled** for complex products. When a product is assigned to a license, the value of this property is automatically modified to **Enabled**. Consider that enabling product monitoring automatically enables product discovery, and disabling product discovery automatically disables product monitoring.

Multi-instance
When you enable the multi-instance property for a product, the Tivoli License Compliance Manager agent is able to detect multiple installations of the same product component on a system. The default is **Disabled**.

To define these properties for a product, you must be logged on as an **Administrator**, or **License and Software Asset Manager**.

Defining the monitoring property

Follow this procedure to enable or disable monitoring for a product.

Perform the following steps:

1. In the portfolio, click **Define Product Properties** and then click **Define Monitoring** in the expanded task group.
2. You can search for a product by completing the selection criteria as follows:

   Hierarchy level
   Select at what level you want to define the monitoring setting for the product.

   Software vendor
   Select the software vendor of the product for which you want to define the monitoring setting.

   SW platform
   Select the operating system of the product for which you want to define the monitoring setting. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products marked with that operating system in the catalog.

   Product name
   To limit the selection criteria by product name matching, type part of a product name, preceded, followed, or surrounded by wildcard characters

(%). All products that have names that match are available for selection on the next panel. Leave the field blank if you do not want to use product name matching.

Product type

Search for a product according to its type. Possible values are:

All products

Search for complex and simple products.

Complex products

Search for complex products only.

Simple products

Search for simple products only.

For a definition of simple and complex products, see "Complex products, simple products, components" on page 6.

Property status

Search for a product according to the current monitoring setting. Possible values are:

Enabled

Use statistics for the product are collected.

Disabled

No use statistics for the product are collected and only inventory information is available on the administration server.

Both Search for products regardless of the monitoring setting.

3. Click **Search**.
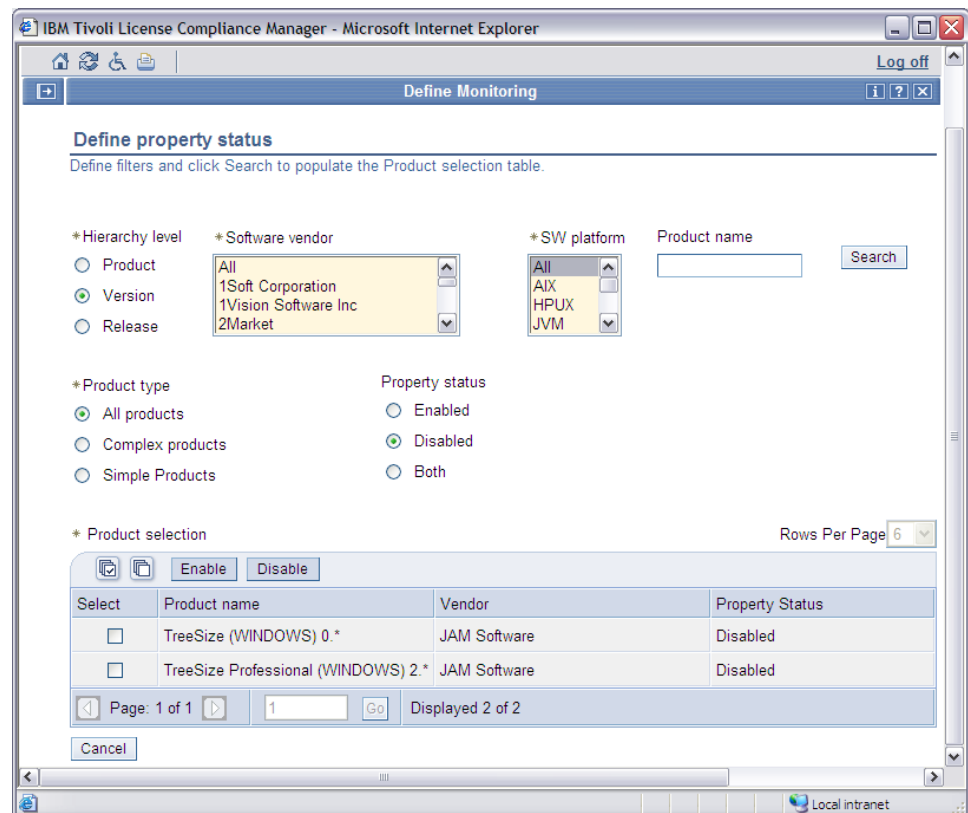
4. Select the products for which you want to define monitoring. Note that if you click on the **Select all** icon, only the first 500 products of the catalog are selected and not the entire set of products available in the catalog. You can change this default value by setting queryMaxRows in the system.properties file. For details, see *IBM Tivoli License Compliance Manager: Installation, Planning, and Configuration.*

5. Click **Enable** to enable monitoring for the selected products; otherwise click **Disable**.

The default value of the monitoring property is **Disabled**. Only enable product monitoring if you want to collect use statistics for the product to be monitored. When a use license is assigned to a product, version, or release, this value is automatically modified to **Enabled**. The product monitoring setting is hierarchy dependent, that is, if you set product monitoring at the product level in the hierarchy, it overwrites any settings at version or release levels.

Defining the discovery property

Follow this procedure to enable or disable discovery for a product.

Perform the following steps:

1. In the portfolio, click **Define Product Properties** and then click **Define Discovery** in the expanded task group.

2. You can search for a product by completing the selection criteria as follows:

   Hierarchy level
   Select at what level you want to define the discovery setting for the product.

   Software vendor
   Select the software vendor of the product for which you want to define the discovery setting.

   SW platform
   Select the operating system of the product for which you want to define the discovery setting. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products marked with that operating system in the catalog.

   Product name
   To limit the selection criteria by product name matching, type part of a product name, preceded, followed, or surrounded by wildcard characters (%). All products that have names that match are available for selection on the next panel. Leave the field blank if you do not want to use product name matching.

   Product type
   Search for a product according to its type. Possible values are:

   All products
   Search for complex and simple products.

   Complex products
   Search for complex products only.

   Simple products
   Search for simple products only.

For a definition of simple and complex products, see "Complex products, simple products, components" on page 6.

Property status

Search for a product according to the current discovery setting. Possible values are:

Enabled

The product can be found during a software scan.

Disabled

The product cannot be found during a software scan.

Both Search for products regardless of the discovery setting.

3. Click **Search**.
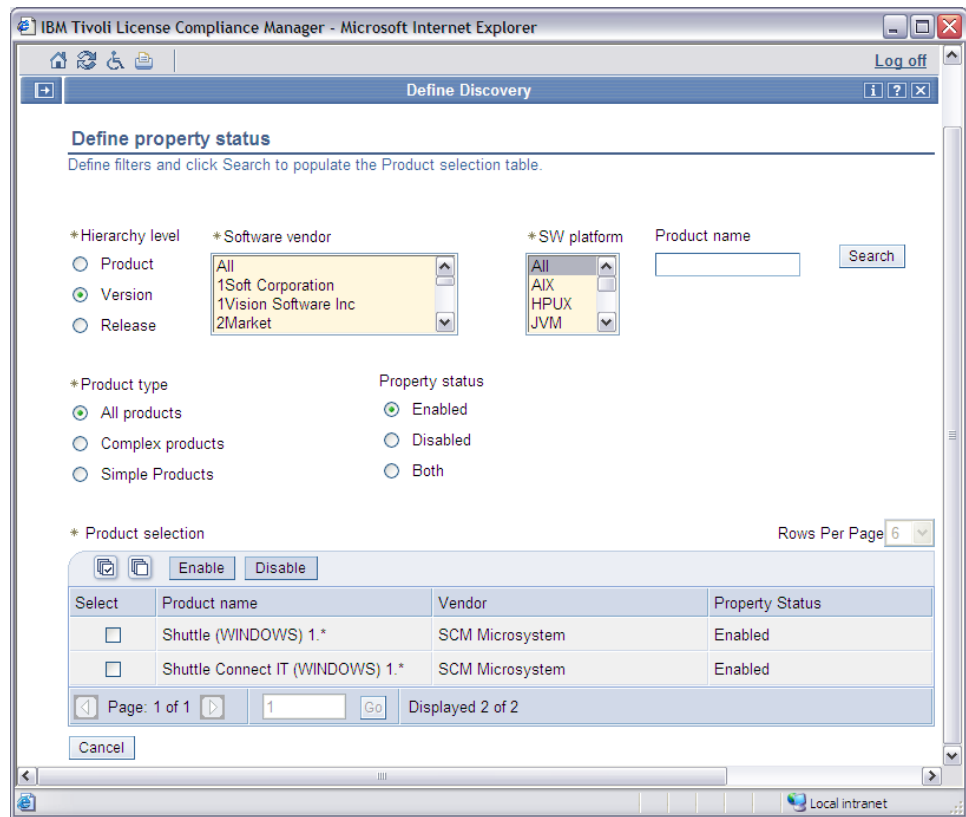
4. Select the products for which you want to define the discovery property. Note that if you click on the **Select all** icon, only the first 500 products of the catalog are selected and not the entire set of products available in the catalog. You can change this default value by setting queryMaxRows in the system.properties file. For details, see *IBM Tivoli License Compliance Manager: Installation, Planning, and Configuration.*

5. Click **Enable** to enable discovery for the selected products; otherwise click **Disable**.

The default value for the discovery property is **Enabled** for simple products and **Disabled** for complex products. When a product is assigned to a license, the value of this property is automatically modified to **Enabled**. The discovery setting is hierarchy dependent, that is, if you set product discovery at the product level in the hierarchy, it overwrites any settings at version or release levels.

Defining the multi-instance property

Follow this procedure to enable or disable the multi-instance property for a product.

Perform the following steps:

1. In the portfolio, click **Define Product Properties** and then click **Define Multi Instance** in the expanded task group.
2. You can search for a product by completing the selection criteria as follows:

   Hierarchy level
   Select at what level you want to define the multi-instance setting for the product.

   Software vendor
   Select the software vendor of the product for which you want to define the multi-instance setting.

   SW platform
   Select the operating system of the product for which you want to define the multi-instance setting. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products marked with that operating system in the catalog.

   Product name
   To limit the selection criteria by product name matching, type part of a product name, preceded, followed, or surrounded by wildcard characters (%). All products that have names that match are available for selection on the next panel. Leave the field blank if you do not want to use product name matching.

   Product type
   Search for a product according to its type. Possible values are:

   All products
   Search for complex and simple products.

   Complex products
   Search for complex products only.

   Simple products
   Search for simple products only.

   For a definition of simple and complex products, see "Complex products, simple products, components" on page 6.

   Property status
   Search for a product according to the current multi-instance setting. Possible values are:

   Enabled
   The agent is able to detect multiple installations of the same product component.

   Disabled
   The agent is unable to detect multiple installations of the same product component.

   Both Search for products regardless of the multi-instance setting.

3. Click **Search**.

IBM Tivoli License Compliance Manager - Microsoft Internet Explorer

Log off

Define Multi Instance

Define property status

Define filters and click Search to populate the Product selection table.

* Hierarchy level
- ○ Product
- ⊙ Version
- ○ Release

* Software vendor
All
1Soft Corporation
1Vision Software Inc
2Market

* SW platform
All
AIX
HPUX
JVM

Product name

Search

* Product type
- ⊙ All products
- ○ Complex products
- ○ Simple Products

Property status
- ○ Enabled
- ⊙ Disabled
- ○ Both

* Product selection

Rows Per Page 6

Enable   Disable

Select	Product name	Vendor	Property Status
☐	4NT (WINDOWS) 2.*	JP Software Inc	Disabled
☐	4NT (WINDOWS) 3.*	JP Software Inc	Disabled

Page: 1 of 1   1   Go   Displayed 2 of 2

Cancel

Done   Local intranet

4. Select the products for which you want to define the multi-instance property. Note that if you click on the **Select all** icon, only the first 500 products of the catalog are selected and not the entire set of products available in the catalog. You can change this default value by setting queryMaxRows in the system.properties file. For details, see *IBM Tivoli License Compliance Manager: Installation, Planning, and Configuration.*

5. Click **Enable** to enable multi-instance for the selected products; otherwise click **Disable**.

The default value of the multi-instance property is **Disabled**. The multi-instance setting is hierarchy dependent, that is, if you set multi-instance at the product level in the hierarchy, it overwrites any settings at version or release levels.

Chapter 7. Managing software entitlement and licenses

These topics provide instructions for the tasks involved in creating and maintaining license entitlement information and licenses for products.

You perform these tasks using a browser to access the Web UI on the administration server.

Managing software entitlement is the responsibility of the **Administrator** for small organizations, the **License and Software Asset Manager** for large organizations, and the **Software Resources Manager** for report generation.

License entitlement and license information relate to a specific organization, whose details must be recorded in the administration server database. You are prompted to select the organization you want to work with when you log on to the administration server. To change the organization during a session, click the **Home** icon on the tool bar and select a different organization from the list that is displayed.

Changes in license information that you make on the administration server are automatically downloaded to the organization's runtime servers at regular intervals. Refer to *Planning, Installation, and Configuration*, for more information on the interval.

Related concepts

"Managing software product information" on page 3
Tivoli License Compliance Manager maintains a catalog in which are stored the details of all the products that can be monitored. This catalog resides on the administration server and a copy of it is periodically downloaded to each runtime server.

"Procurement management" on page 9
Managing procurement in Tivoli License Compliance Manager consists of a set of license management tasks.

Managing licenses

Follow this procedure to create, modify, and delete software licenses.

You provide the procurement information of the license according to the terms and conditions of the contract. When you create a new license using the Web UI, a distribution is automatically created for use by the Tivoli License Compliance Manager license. Instead, when you create a license using the **dataimp** command, a distribution is not automatically created.

To manage license procurement you must be logged on as the **Administrator** for small organizations, or the **License and Software Asset Manager** for large organizations.

Creating a new license

Follow this procedure to create a new license.

Perform the following steps:

1. In the portfolio, click **Manage Licenses**.

   Note: You can also create licenses by exporting them from a database and importing them using the **dataimp** command. See *IBM Tivoli License Compliance Manager: Commands* for information on how to export and import licenses, including import constraints.

2. Select **Create**.

3. Use this panel to create the business information for the license. You can provide the following information:

   License name
   The name that you want to associate with the license that you are creating. Use a name that is easy to remember to help you when, for example, you want to search for a specific license.

   License type
   Select the license type. Possible values are:
   - Usage Concurrent Session
   - Usage Concurrent Nodelock
   - IPLA Full Capacity
   - IPLA Sub-Capacity
   - IPLA VU Full Capacity
   - IPLA VU Sub-Capacity
   - Install Instance
   - Install IPLA Full Capacity
   - Install IPLA Sub-Capacity
   - Install IPLA VU Full Capacity
   - Install IPLA VU Sub-Capacity

   For a definition of the license types, see "License types and structures" on page 9.

Total quantity

The entitled quantity assigned to the license and available for distribution.

Total cost

The total cost of the license.

Currency

Select the currency of the total cost from the drop-down list.

Purchase type

The type of purchase to which the license refers. Possible purchase types are:

- OEM
- Retail
- Unknown
- Upgrade
- Volume

Start date

The date when the license first becomes valid. The license becomes valid at midnight GMT on the date you specify. Note that if the start date refers to the past, the license becomes valid at midnight GMT on the date of creation.

Expiration date

The last day that the license is valid. The license is no longer valid at midnight GMT on the date you specify.

4. Click **Apply** to apply the changes you made to the **Business information**, without closing the panel.

5. Click **Legal information** to complete the terms and conditions associated with this license.

6. You can provide the following information:

License key
> The key that is associated with the license, to be used when the product is installed.

License owner
> The owner of the license you are creating, such as a person or department.

Contract number
> The number of the contract that is associated with the license.

Order reference
> The order reference that is associated with the license (for example, the order number of the purchase).

Delivery date
> The date when the software related to the license is delivered.

Terms and conditions
> The terms and conditions of the license agreement that is associated with the license.

7. If the license follows processor value unit licensing (Full Capacity or Sub-Capacity) and you want to review the information of the value unit table associated to the license, click **Processor Value Units**. This tab is not available for licenses that do not follow processor value unit licensing.
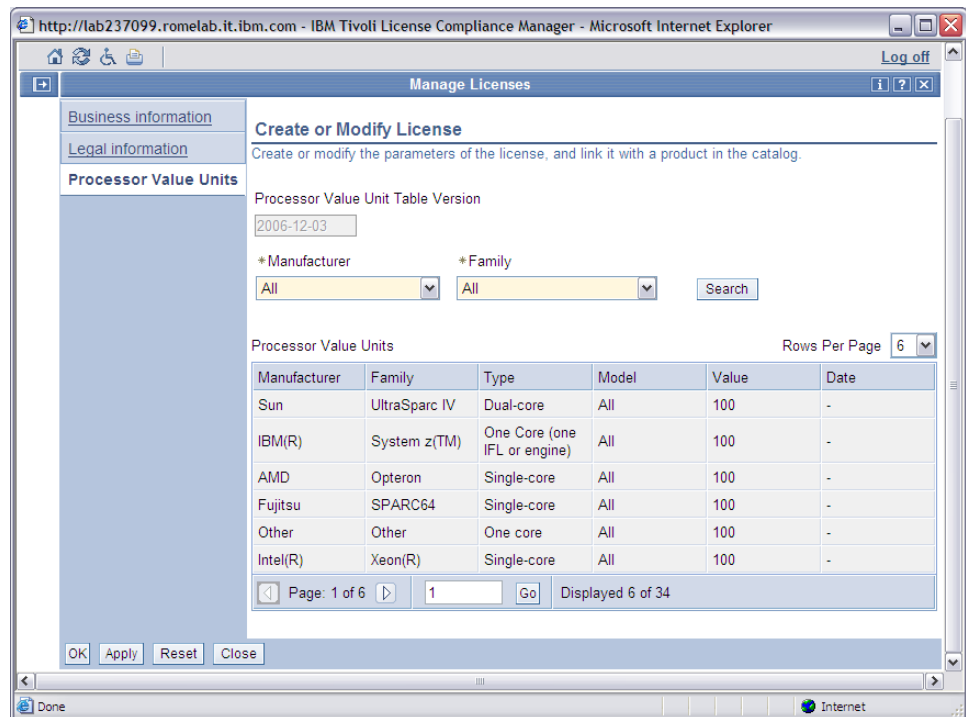
Use this panel to review the information of the processor value unit table associated to the license. The version of the table corresponds to the date indicated in the Processor Value Unit Table Version field. The value unit table shows the following information, none of which is editable:

Manufacturer
> The processor's manufacturer.

Family
> The processor's family.

Type The processor's type in terms of number of cores.

Model The processor's model.

Value An integer representing the value associated to this type of processor.

Date Indicates when the processor value was associated to this license.

If any of these information is indicated as unknown, it means that the processor is not yet included in the processor value unit table.

8. If available, click on any **Custom fields** and type the appropriate values.
9. Click **OK**.

Creating a new license from an electronic entitlement

Follow this procedure to create a new license from an electronic entitlement.

You can also create a license from an electronic entitlement using the **eeimport** command. For details, see *IBM Tivoli License Compliance Manager: Commands*.

You can obtain an electronic entitlement from the License management support Web site (at: http://www-5.ibm.com/software/lms). To download an electronic entitlement, you must either be a Passport Advantage designated contact for the site under which the product was licensed or have been delegated access on this Web site by the designated contact. For more information, see the Help function on the License management support Web site.

Note: When you use an electronic entitlement to create a license that follows processor value unit licensing, the electronic entitlement contains a reference to a processor value unit table version. You will not be able to import the electronic entitlement if the version of the processor value unit table currently used by Tivoli License Compliance Manager is older than the version of the processor value unit table referenced by the electronic entitlement. To import the electronic entitlement, you must first download the latest version of the processor value unit table from the License management support Web site at https://www-5.ibm.com/software/lms using the **vutableimp** command. For details on the command, see *IBM Tivoli License Compliance Manager: Commands*.

To create a license from an electronic entitlement, perform the following steps:
1. In the portfolio, click **Manage Licenses**.
2. Click **Create from file**. You can use this panel to import the electronic entitlement.
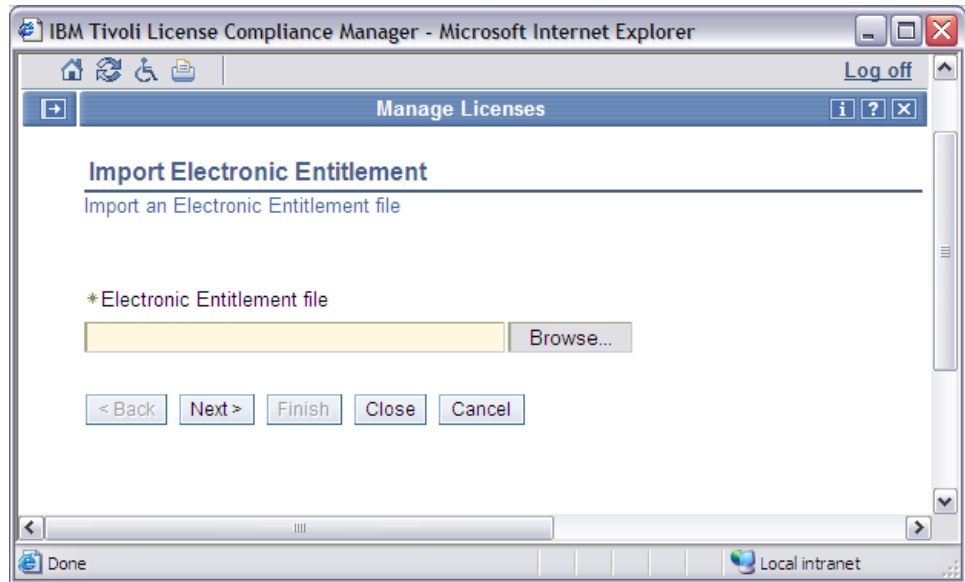
3. Click **Browse** and search for the electronic entitlement file. Click **Next**.
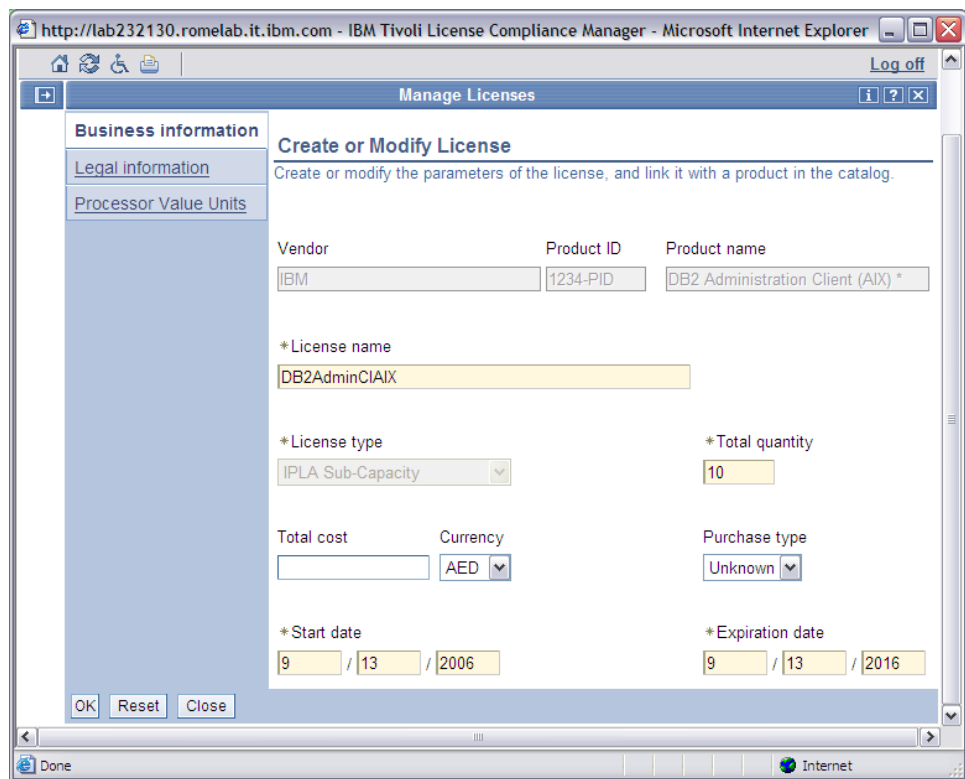
4. Use this panel to create the business information for the license. You can provide the following information:

   Note: Depending on the type of electronic entitlement, you might not be able to change some fields.

   License name
   The name that you want to associate with the license that you are creating. Use a name that is easy to remember to help you when, for example, you want to search for a specific license.

Total quantity

The entitled quantity assigned to the license and available for distribution. Note that the quantity field is set to the value that was included in the electronic entitlement file. This quantity reflects the use-authorization entitlement only for the transaction which caused this electronic entitlement to be made available to you, and might not reflect your company's total use-authorization entitlement for this product.

Total cost

The total cost of the license.

Currency

Select the currency of the total cost from the drop-down list.

Purchase type

The type of purchase to which the license refers. The possible purchase types are:

- OEM
- Retail
- Unknown
- Upgrade
- Volume

Start date

The date when the license first becomes valid. The license becomes valid at midnight GMT on the date you specify. Note that if the start date refers to the past, the license becomes valid at midnight GMT on the date of creation.

Expiration date

Type the last day that the license is valid. The license is no longer valid at midnight GMT on the date you specify.

5. Click **Apply** to apply the changes you made to the **Business information**, without closing the panel.

6. Click **Legal information** to complete the terms and conditions associated with this license. You can provide the following information:

License key

The license key that is associated with the license.

License owner

The owner of the license you are creating, such as a person or department.

Contract number

The number of the contract that is associated with the license.

Order reference

The order reference that is associated with the license.

Delivery date

The date that the software related to the license is delivered.

Terms and conditions

The terms and conditions of the license agreement that is associated with the license.

7. If the license follows processor value unit licensing (Full Capacity or Sub-Capacity) and you want to review the information of the processor value unit table associated to the license, click **Processor Value Units**. This tab is not

available for licenses that do not follow processor value unit licensing. The version of the table corresponds to the date indicated in the Processor Value Unit Table Version field.

The value unit table shows the following information, none of which is editable:

Manufacturer
> The processor's manufacturer.

Family
> The processor's family.

Type The processor's type in terms of number of cores.

Model The processor's model.

Value An integer representing the value associated to this type of processor.

Date Indicates when the processor value was associated to this license.

If any of these information is indicated as unknown, it means that the processor is not yet included in the processor value unit table.

8. If available, click on **Custom fields** and define the appropriate values.
9. Click **OK**.

Modifying an existing license

Follow this procedure to work with an existing license.

When you are modifying a license, you can first filter the existing licenses so that the **Licenses** table becomes more manageable.

For information about creating a license distribution and assigning license quotas to it, refer to "Assigning a license" on page 73. For a description of the complete flow from managing licenses to creating a distribution, refer to "Creating a distribution quota scenario" on page 79.

> **Related tasks**
>
> "Assigning a license" on page 73
> Follow this procedure to assign products to a license and, optionally, limit the access to a license to specific divisions, agents, nodes, and users.
>
> "Creating a distribution quota scenario" on page 79
> The following scenarios describe two of the possible flows you follow when assigning licenses for distribution.

Filtering for a license

When you want to modify an existing license, search for the license first.

Perform the following steps:

1. In the portfolio, click **Manage Licenses**.

   Search for existing licenses using any of the following criteria:

   License name
   > Type the name that was associated with the license when it was created.

   License type
   > Select the type of license. For a list and description of the license types see Table 1 on page 9.

   Contract number
   > Type the number of the contract associated with the license.

Delivery month
   Select the month during which the software to which the license relates was delivered.

Delivery year
   Type the year during which the software to which the license relates was delivered.

2. Click **Search**. The **Licenses** table shows the results from your search.
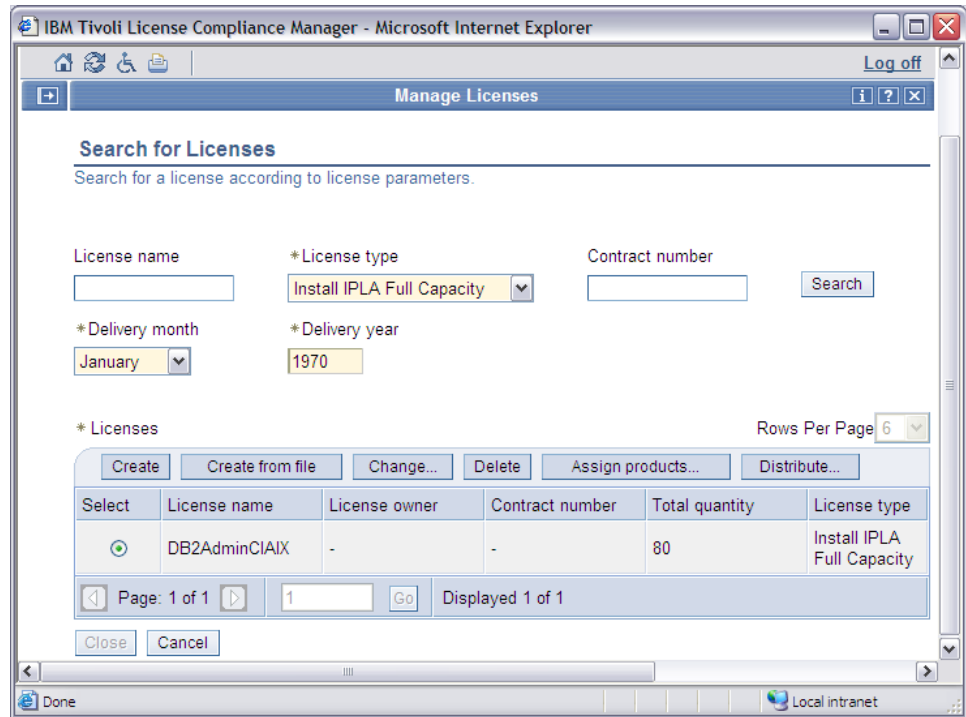
Modifying the license

When you have filtered for existing licenses, you can select the license with which you want to work from the **Licenses** table.

Use this panel to modify or delete existing licenses, or to assign products to a license.

To delete a license, select the license in the **Licenses** table and click **Delete**.

To modify a license, perform the following steps:

1. Filter for an existing license as described in "Filtering for a license" on page 70.
2. To modify the data of a license, select the license in the **Licenses** table and click **Change**.
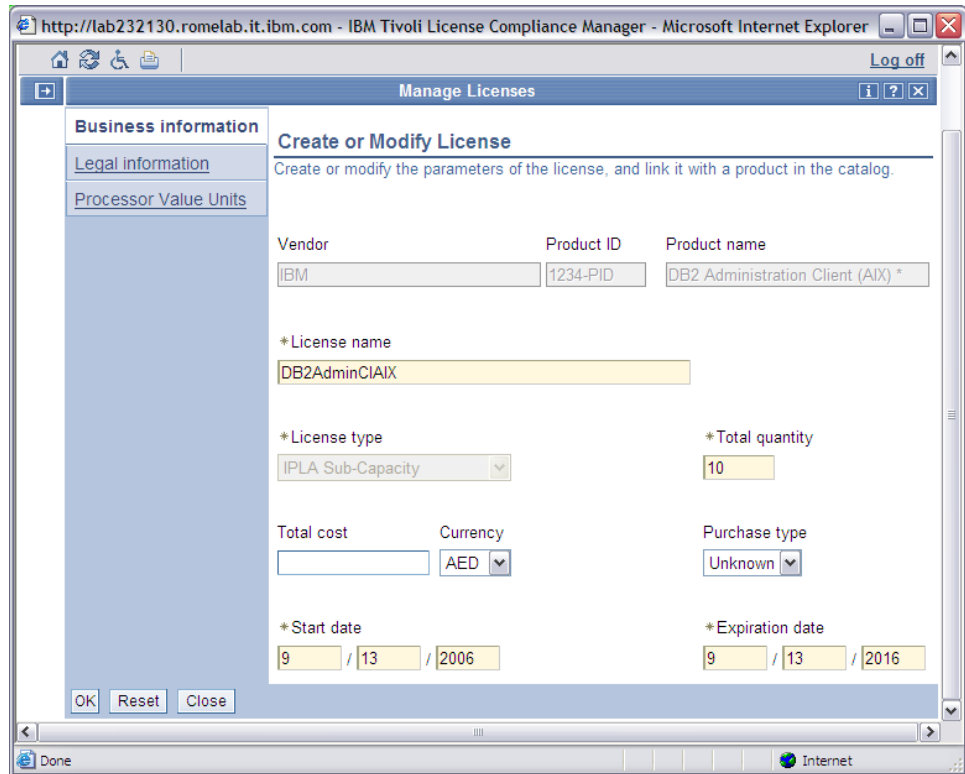
3. You can change the following information:

License name
> The name that was associated with the license when it was created.

Total quantity
> The number of entitled licenses.

Total cost
> The total cost of the license.

Currency
> Select the currency of the total cost from the drop-down list.

Purchase type
> The type of purchase to which the license refers. The possible purchase types are:
> - OEM
> - Retail
> - Unknown
> - Upgrade
> - Volume

Start date
> The date when the license first becomes valid. The license becomes valid at midnight GMT on the date you specify.

Expiration date
> The last day that the license is valid. The license is no longer valid at midnight GMT on the date you specify.

4. Click **Legal information** to change the terms and conditions associated with this license.

5. Click **Processor Value Units** if this license follows processor value unit licensing and you want to review the information of the processor value unit table associated to the license.

6. Click **OK**.

Assigning a license

Follow this procedure to assign products to a license and, optionally, limit the access to a license to specific divisions, agents, nodes, and users.

You can assign licenses only if you have a role of **Administrator**, or **License and Software Asset Manager**. Assigning a license comprises the following steps:

- Assigning products to the license. If you have created the license using an electronic entitlement, the product is already assigned to the license and the product assignment cannot be changed.
- Modifying the license settings to indicate that the license has been verified.
- Distributing the license to targets.

To assign licenses, perform the following steps:

Note: You can also create license distributions by exporting them from a database and importing them using the **dataimp** command. See *IBM Tivoli License Compliance Manager: Commands* for information on how to export and import licenses.

1. In the portfolio, click **Assign Licenses**.

2. You can use this panel to search for the license that you want to assign. Complete the panel as follows:

   License name
   The name that was assigned to the license when it was created.

   License type
   Select the type of license from the drop-down list.

Delivery period time range
> The time range in which the software related to the license was delivered.

Licenses created from an electronic entitlement file
> Search for licenses that were created from an electronic entitlement file.

Licenses with no products assigned
> Search for licenses that do not have products assigned.

Licenses not yet verified
> When a license is created it is given a not verified flag to indicate that the license distribution data that was automatically created has not been validated. When you verify the data, you can change the flag to verified. Use this filter to select licenses according to whether you have set the flag.

3. Click **Next**.

4. To assign products to the license, select the license and click **Assign products**.
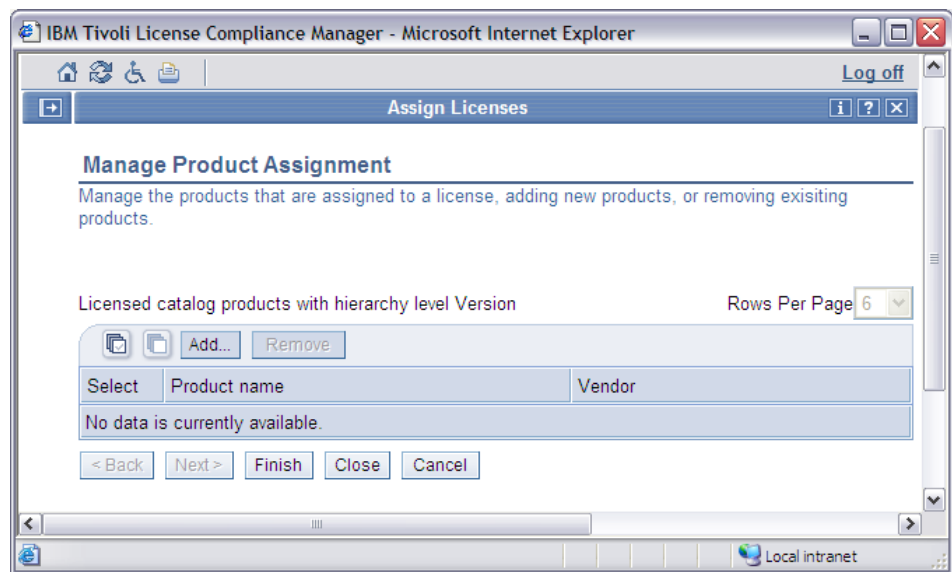
When you created an IPLA type license, the **Licensed catalog products** table has **Add IBM products** and **Add non IBM products** buttons. You can add either all IBM products or all non-IBM products to the license, but not both. See "Creating a distribution quota scenario" on page 79 for an example.

> **Note:** **IBM product** refers to a product sold by IBM and included in the IBM Software Catalog.

5. Click **Add** to include a product in the **Licensed catalog products** table.
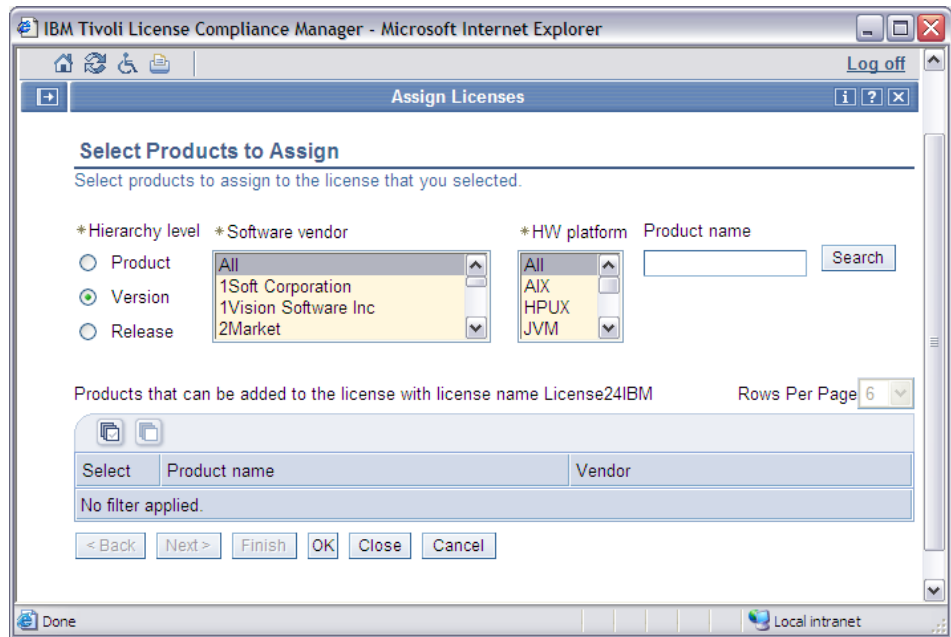
6. Search for and select the products that you want to assign to the license.

   Note: All products assigned to a license must have the same hierarchy level. After you have added the first product, the hierarchy level filter is disabled. To change the hierarchy level, you must first delete all previously assigned products.

7. Click **OK**.
8. Click **Finish**.
9. Select the license and click **Change** to modify it.
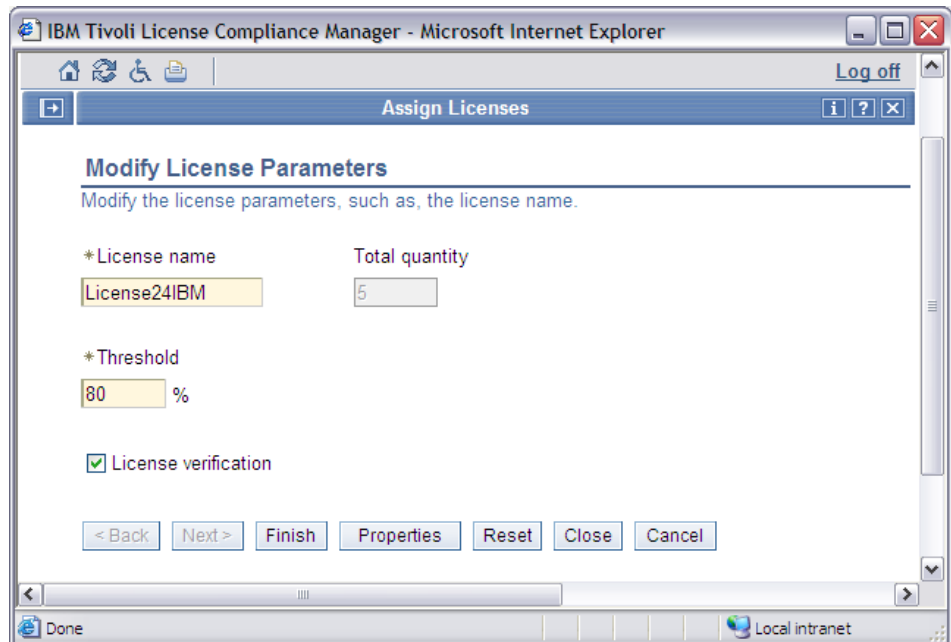
This panel provides some information fields and the parameters that you can set. You can change the following fields:

License name

The name that was associated with the license when it was created.

Threshold

The percentage of license use after which a warning notification is sent to the administrator.

License verification

The license verification flag. Check it to indicate that the license has been verified.

10. Click **Properties** to check the license properties and click **Close**.

11. Click **Finish**.

12. Select the license for which you want to create a distribution quota, and click **Distribute**.
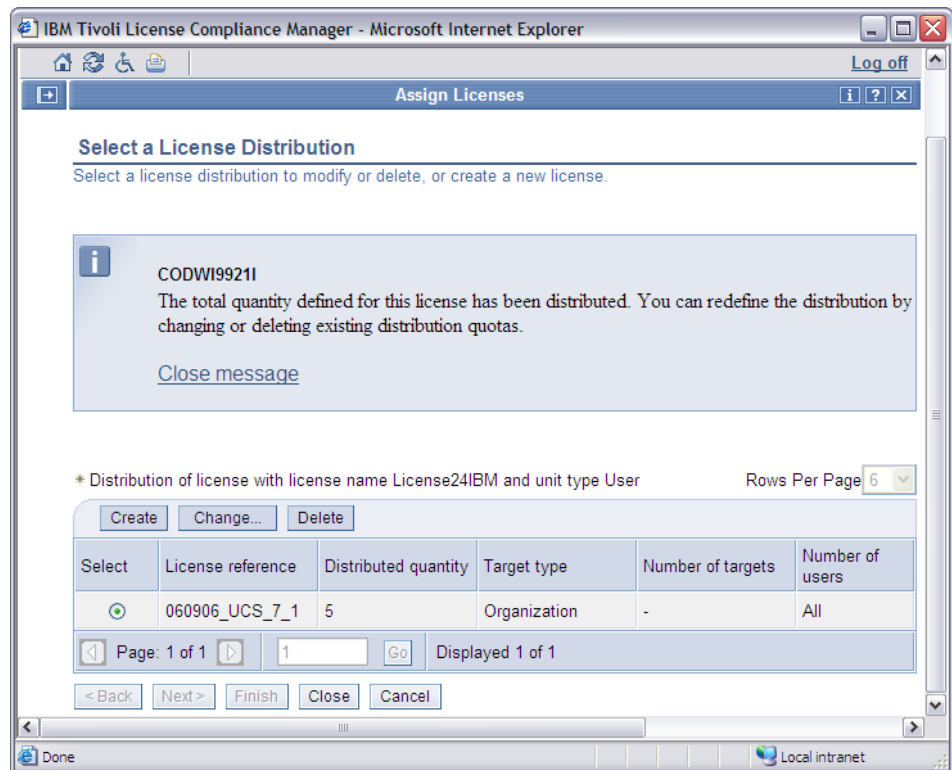
13. When you create a license, the total quantity for the license is automatically assigned to the default target type (Organization). To redefine the distribution quota, select the distribution in the table and click **Change**.
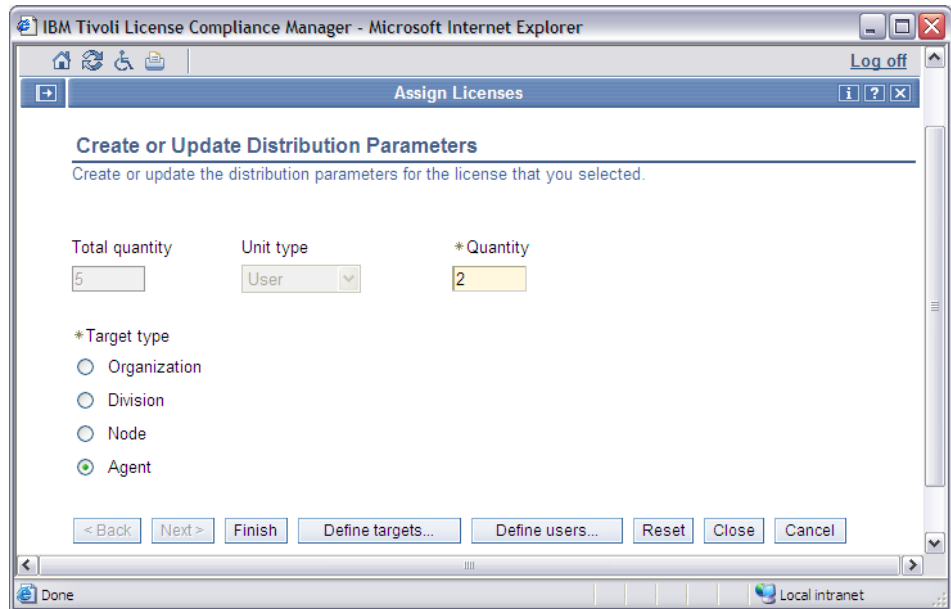
Set the distribution quantity and the target type as follows:

Quantity

The license quantity that you want to assign to the distribution.

Target type

The target type indicates the availability of the license within the organization monitoring structure. You can select the individual targets using **Define targets**. The possible target type values are:

Organization

Distribute the license to the entire organization

Division

Distribute the license to the selected division or divisions

Node   Distribute the license to the selected node or nodes

Agent   Distribute the license to the selected agent or agents

In this scenario, you select the target type **Agent** to distribute the license to a selected agent.

14. Click **Define targets**.
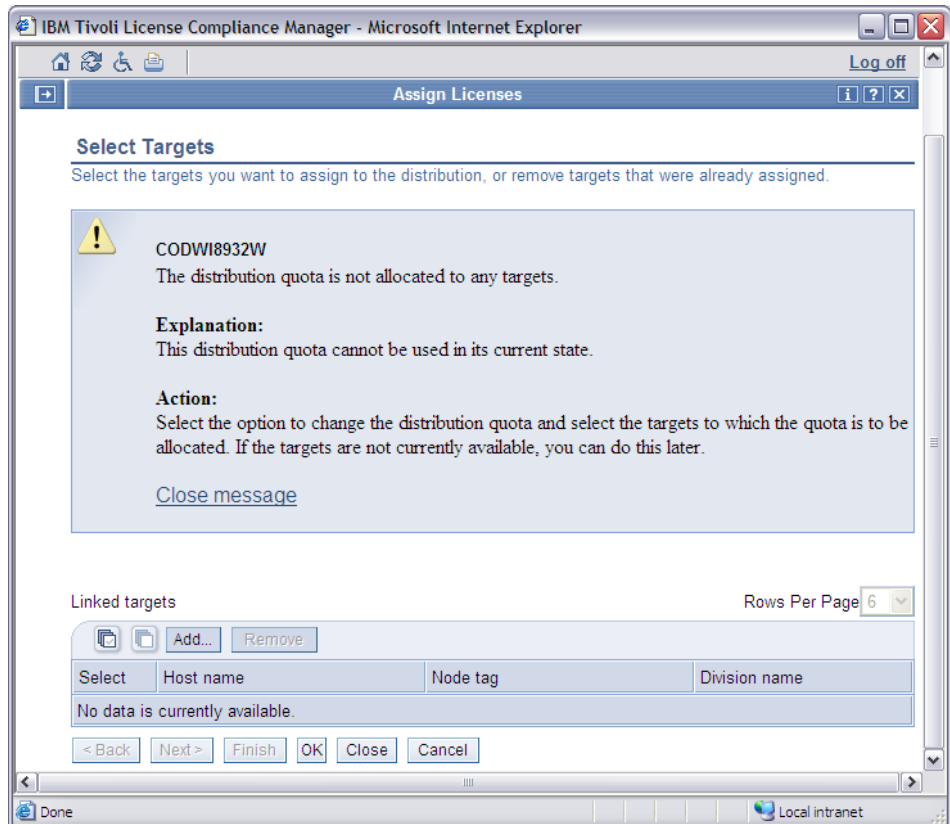
15. Click **Add**.
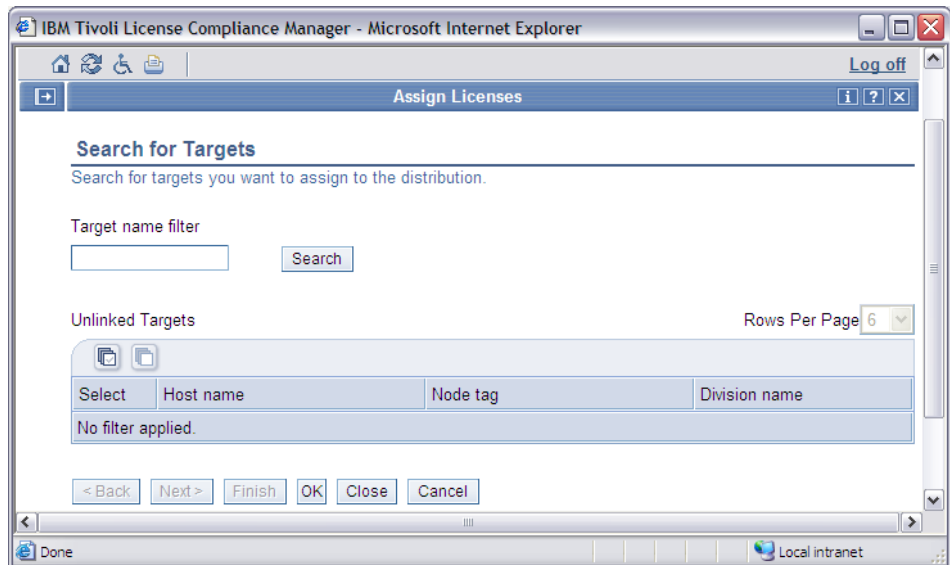
16. Search for the targets to populate the **Unlinked targets** table.
17. Select the targets from the table and click **OK**.
18. Click **OK** again.
19. To assign the license to a selected user, click **Define users**. Note that this button might not be available depending on the license type.
20. Click **Change users**.
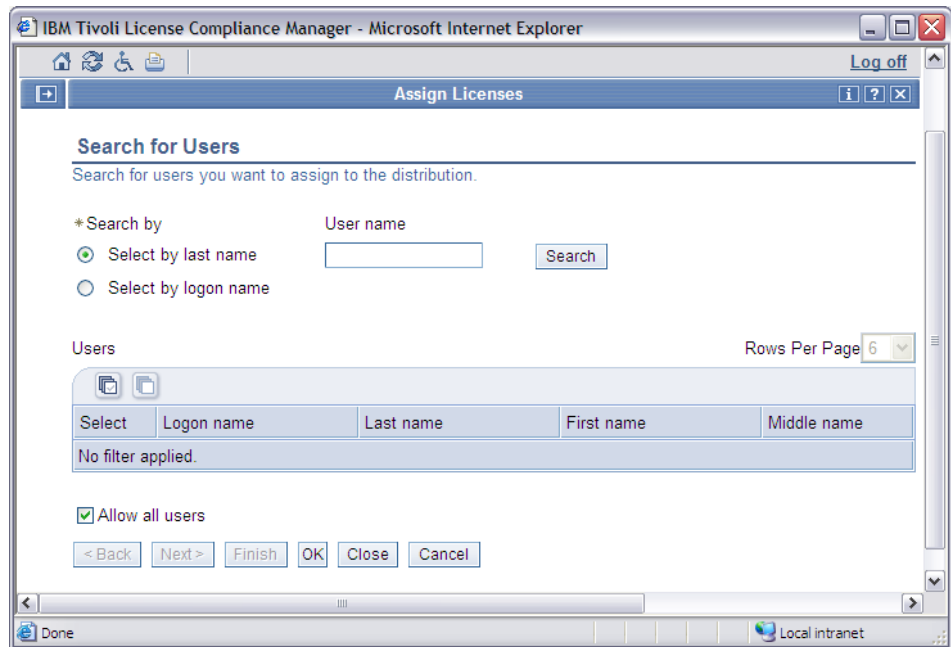
21. Select whether to **Allow all users**, or search for users and select a user from the **Users** table. Click **OK**.

> **Note:** When you assign a user to a license distribution quota, you will only be able to assign a multi-instance value of disabled or same user. See "Modifying the license" on page 71.

22. Click **Finish** in the Create or Update Distribution Parameters panel.

Related tasks

"Creating a distribution quota scenario"
The following scenarios describe two of the possible flows you follow when assigning licenses for distribution.

Creating a distribution quota scenario

The following scenarios describe two of the possible flows you follow when assigning licenses for distribution.

The first scenario is about assigning a Usage Concurrent Session license, the second scenario is about assigning a Sub-Capacity license.

How you assign licenses for distribution depends on how the license parameters were defined during license creation.

You can assign licenses only if you have a role of **Administrator**, or **License and Software Asset Manager**.

Assigning a Usage Concurrent Session license

For this scenario, assume that you are creating a distribution quota for a Usage Concurrent Session license for the CiscoWorks 2000 Server UNIX product and that you want to assign it to a specific division within the organization.

The **License and Software Asset Manager** for the organization has already created a license named LicCiscoWorks and a quantity of 10. The entire quantity was automatically assigned to the default target type (Organization).

Assigning the license distribution quota to targets includes three distinct steps:
- Assigning products
- Modifying the license settings to indicate that the license has been verified
- Assigning distribution quotas

Note: You cannot assign products to a license that was created from an electronic entitlement.

Assigning a product to the license

Follow this procedure to assign a product to the license.

Perform the following steps:
1. In the portfolio, click **Assign Licenses**.

2. Type the **License name** as **LicCiscoWorks**, and select **Usage Concurrent Session** for the **License type**, and click **Next**.
3. Select the license in the Filtered licenses table and click **Assign products**.
4. Click **Add**, to search for the product to assign to the license.
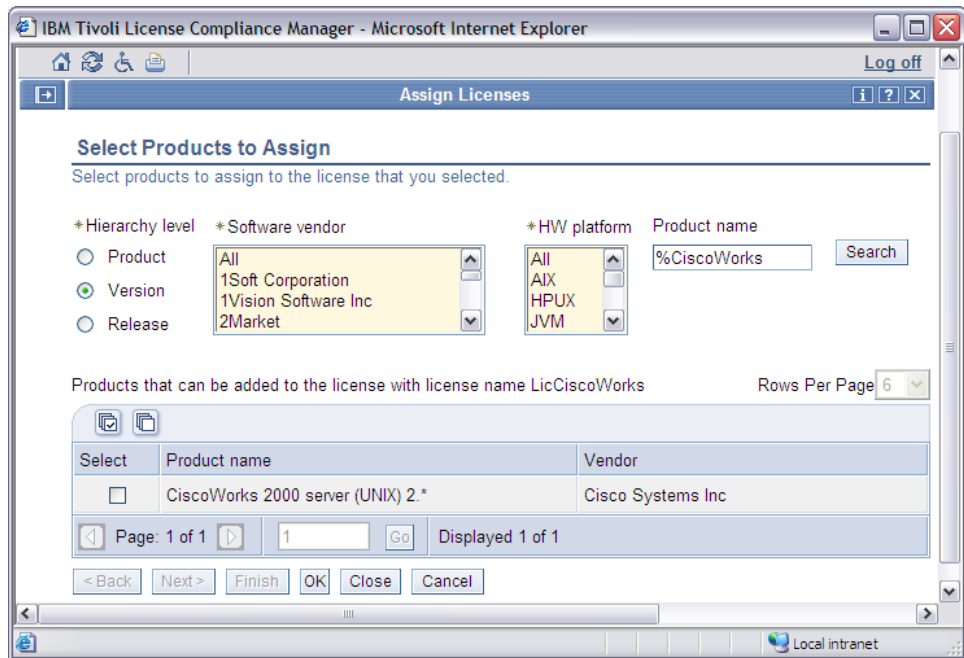
5. In this scenario, select Cisco Systems Inc. as the **Software vendor** and type %CiscoWorks as the **Product name**. Click **Search**.

6. Select the listed product in the table, and click **OK**.

7. Click **Finish**.

Modifying the license settings

After you have assigned products to a license, and before assigning distribution quotas, modify the license settings to indicate that the license has been verified.

To modify the license settings, perform the following steps:

1. Select the license in the Filtered licenses table and click **Change**.

2. Review the license parameters and select **License verification** to indicate that the license has been verified.
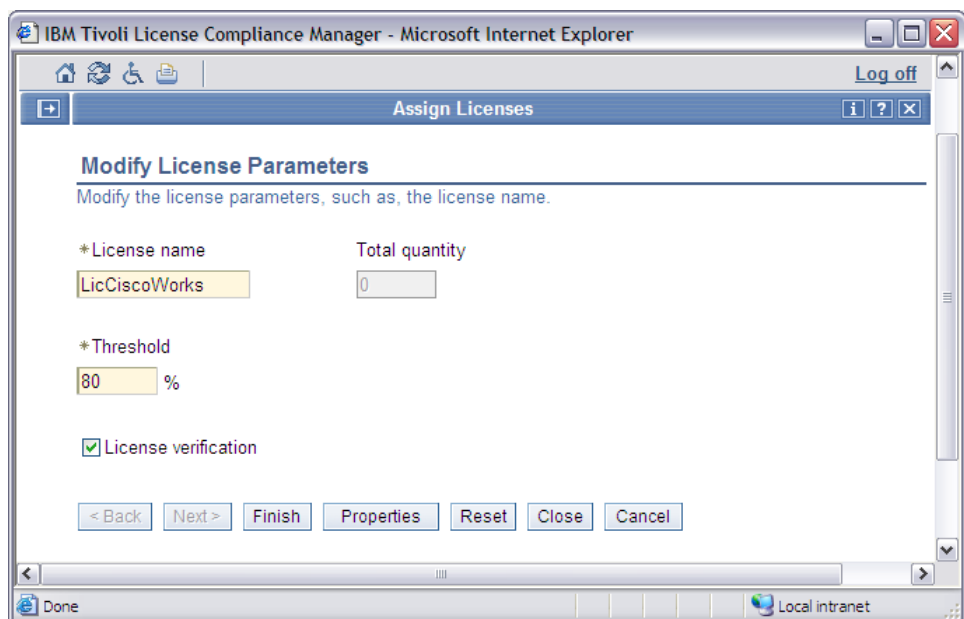
3. Click **Finish**.

Assigning distribution quotas

After you have assigned a product to a license, and reviewed it, you can assign distribution quotas to it.

When the license was created, all the available licenses were assigned to the default target type. Therefore, before you can create a new distribution quota, you must modify the default quota that was created.

To create a new distribution quota, perform the following steps:

1. Select the license in the Filtered licenses table and click **Distribute**.
2. Before you can create a new distribution, you need to change the default distribution. Click **Change**.

3. Modify the **Quantity** value to release some of the distribution quota of the license (in this scenario the quantity changes from 10 to 8), and click **Finish**.
4. Click **Create**.
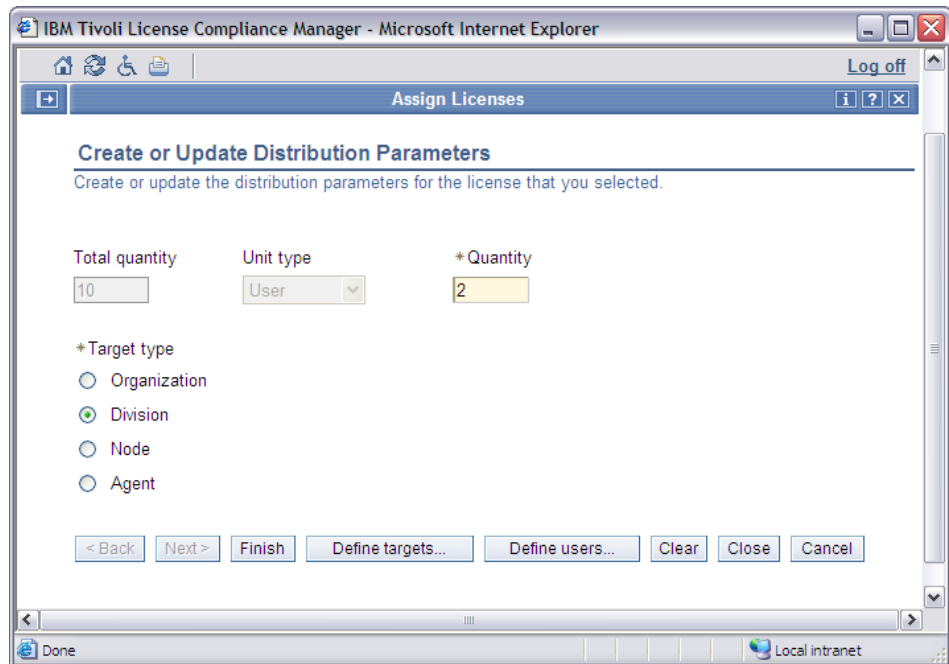
5. Set the distribution **Quantity** to 2, set the **Target type** to **Division**, and click **Define targets**.

6. In the Select Targets panel, click **Add**.

7. In the Search for Targets panel, click **Search**.

8. Select the division to which you want to assign the distribution quota.
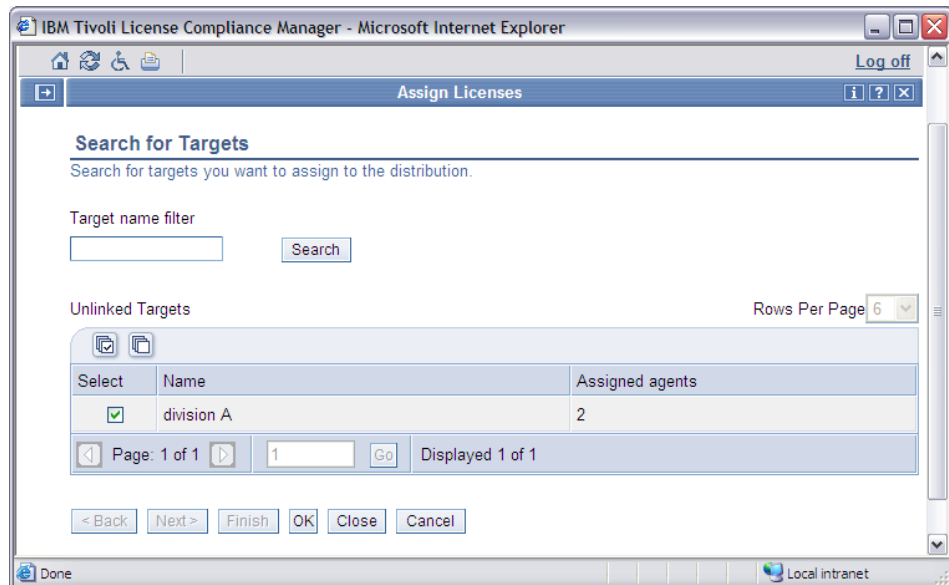
9. Click **OK**.

10. Click **OK** again.

11. Click **Finish**.

12. Now the Select a License Distribution panel shows that you have two distributions available: the distribution that was originally created by your **License and Software Asset Manager** (with target type Organization) and the one that you just created (with target type Division).
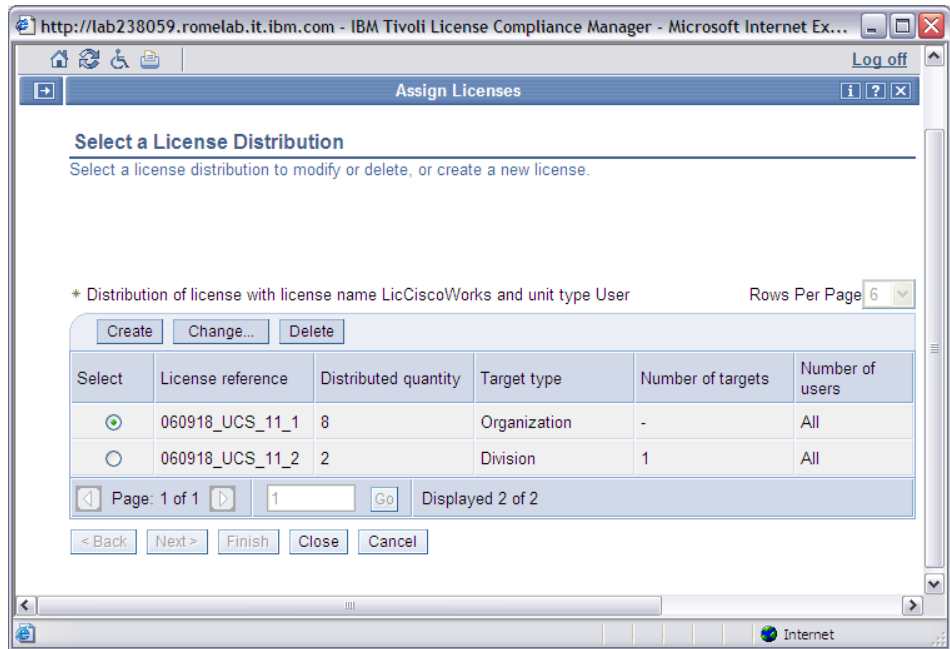
Assigning a Sub-Capacity license

For this scenario, assume that you are creating a distribution quota for an IPLA Sub-Capacity license for the IBM DB2 UDB Data Warehouse Enterprise Edition Version 8.2 product and that you want to assign it to a specific node within the organization.

The **License and Software Asset Manager** for the organization has already created a license named Lic_DB2_UDB and a quantity of 10. The entire quantity has been automatically assigned to the default target type (Organization).

Assigning the license distribution quota to targets includes three distinct steps:
* Assigning products
* Modifying the license settings to indicate that the license has been verified
* Assigning distribution quotas

Note: You cannot assign products to a license that was created from an electronic entitlement.

Assigning a product to the license

Follow this procedure to assign a product to the license.

Perform the following steps:
1. In the portfolio, click **Assign Licenses**.
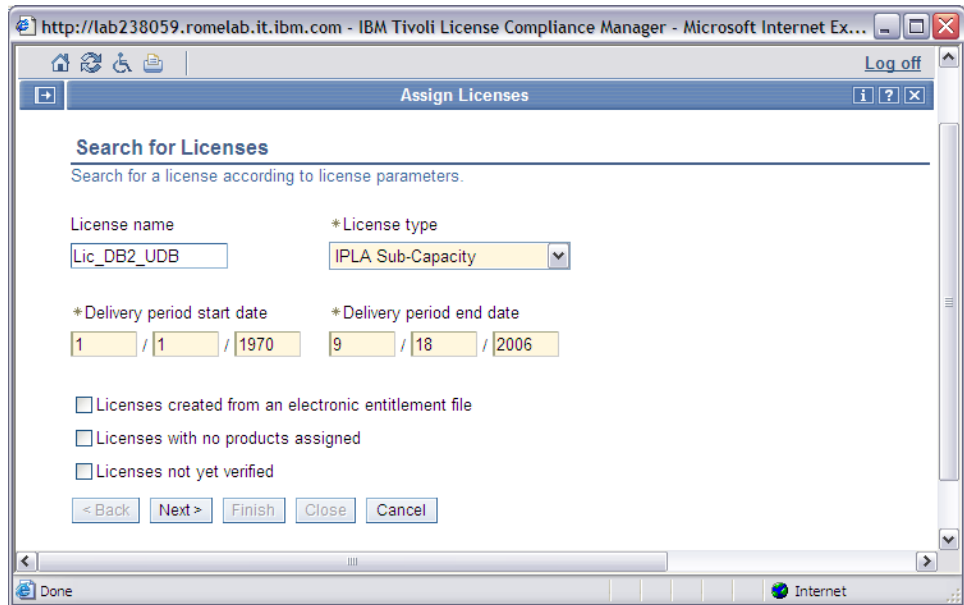
2. Type the **License name** as **Lic_DB2_UDB**, select **IPLA Sub-Capacity** for the **License type**, and click **Next**.

3. Select the license in the Filtered licenses table and click **Assign products**.

4. Click **Add IBM products**, to search for the product to assign to the license.

5. In this scenario, select IBM as the **Software vendor**, and type DB2 UDB Data Warehouse as the **Product name**.

6. In this scenario, DB2 UDB Data Warehouse Enterprise Edition Version 8.2 is to be assigned. Therefore you must set the hierarchy level to **Release** so that catalog entries for version 8.2 can be selected. Setting the hierarchy level to **Product** or **Version** would make it impossible to filter out use information for versions of the product that do not use the sub-capacity pricing model. Click **Search**.
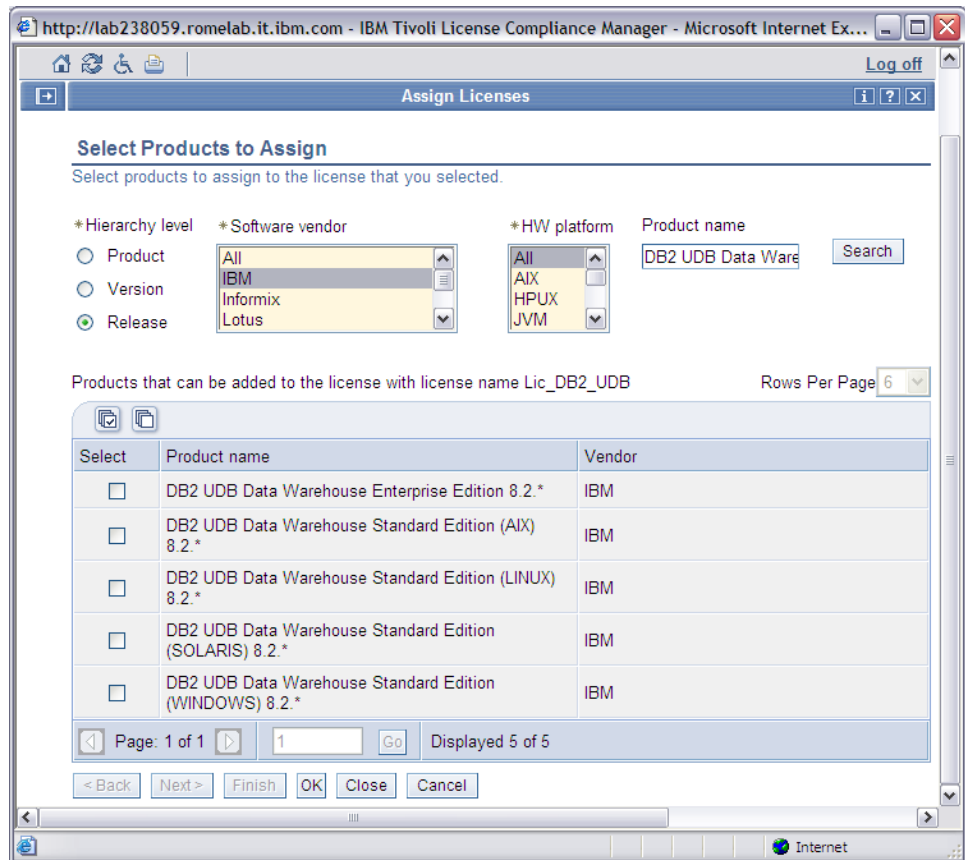
7. Select the appropriate products in the table, and click **OK**.
8. Click **Finish**.

Modifying the license settings

After you have assigned products to a license, and before assigning distribution quotas, modify the license settings to indicate that the license has been verified.

To modify the license settings, perform the following steps:
1. Select the license in the Filtered licenses table and click **Change**.
2. Review the license parameters and select **License verification** to indicate that the license has been verified.
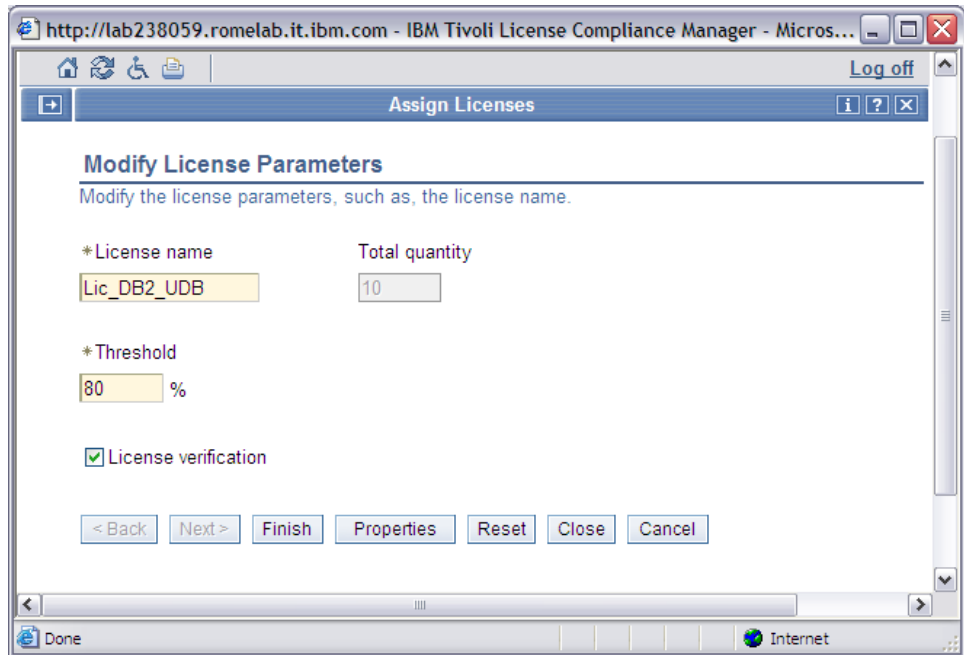
3. Click **Finish**.

Assigning distribution quotas

After you have assigned a product to a new license, and reviewed it, you can assign distribution quotas to it.

When the license was created, all available licenses were assigned to the default target type. Therefore, before you can create a new distribution quota, you must modify the default quota that was created.

To create a new distribution quota, perform the following steps:

1. Select the license in the Filtered licenses table and click **Distribute**.
2. Before you can create a new distribution, you need to change the default distribution. Click **Change**.
3. Modify the **Quantity** value to release some of the distribution quota of the license (in this scenario the quantity changes from 10 to 6), and click **Finish**.
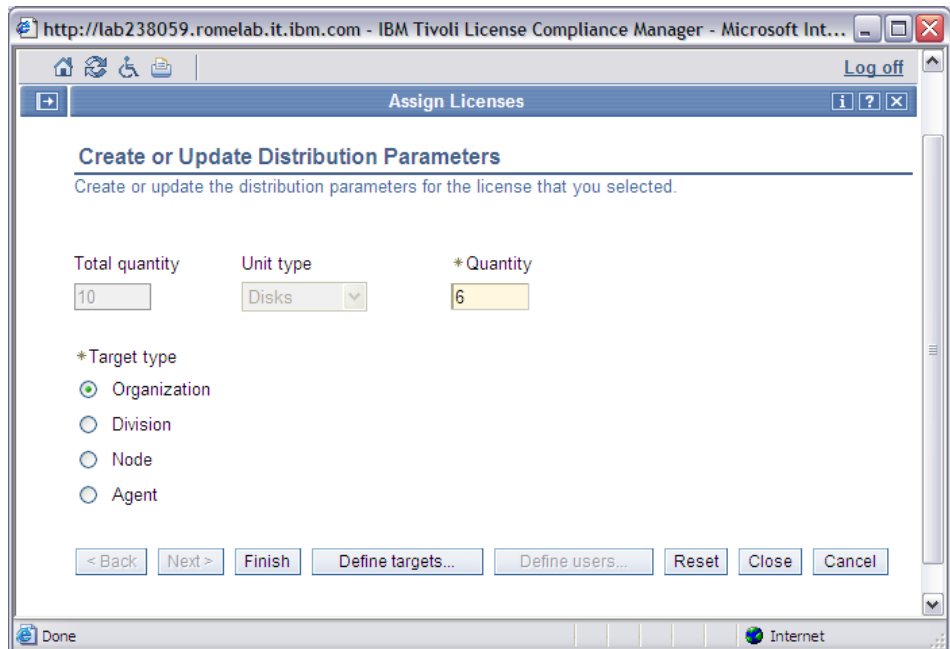
4. Click **Create**.

5. Set the distribution **Quantity** to 4, set the **Target type** to **Node**, and click **Define targets**.
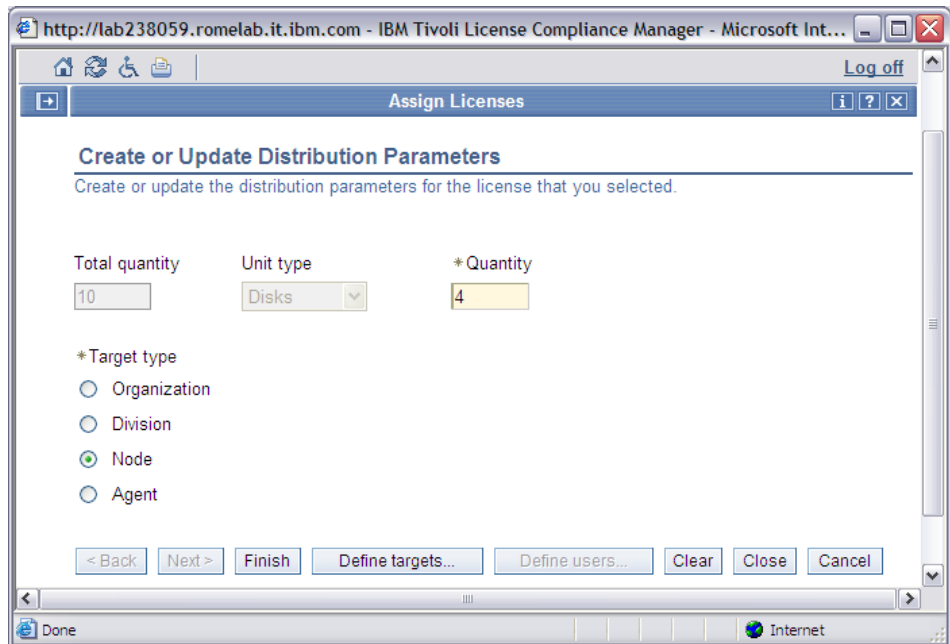
6. In the Select Targets panel, click **Add**.

7. In the Search for Targets panel, click **Search**.

8. Select the node to which you want to assign the distribution quota.
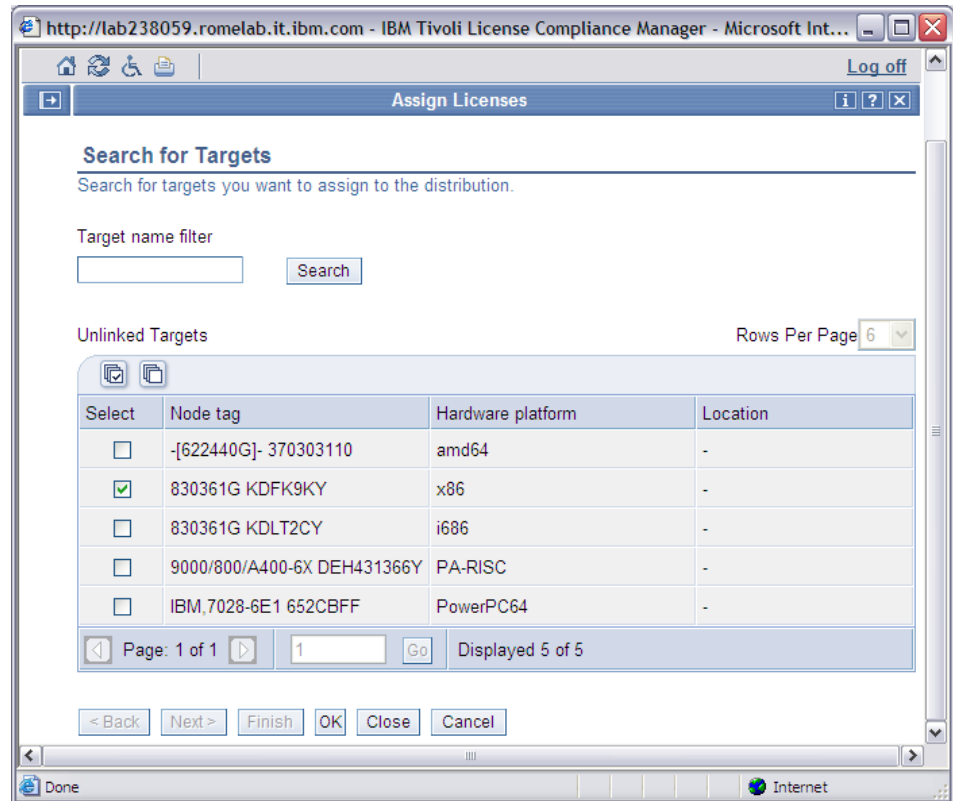
9. Click **OK**.

10. Click **OK** again.

11. Click **Finish**.

12. Now the Select a License Distribution panel shows that you have two distributions available: the distribution that was originally created by your **License and Software Asset Manager** (with target type Organization) and the one that you just created (with target type Node).
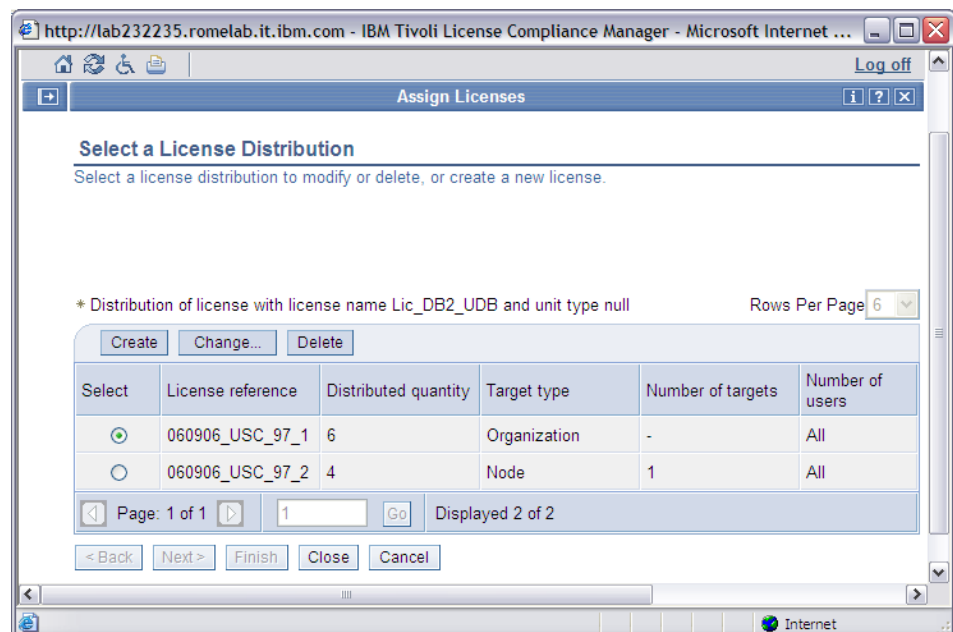
Defining custom fields for licenses

Follow this procedure to add information relating to the terms and conditions of the contract.

You define the custom fields of licenses using the administration server.

To set custom fields for licenses, perform the following steps:

1. In the portfolio, click **Define Custom Fields**.
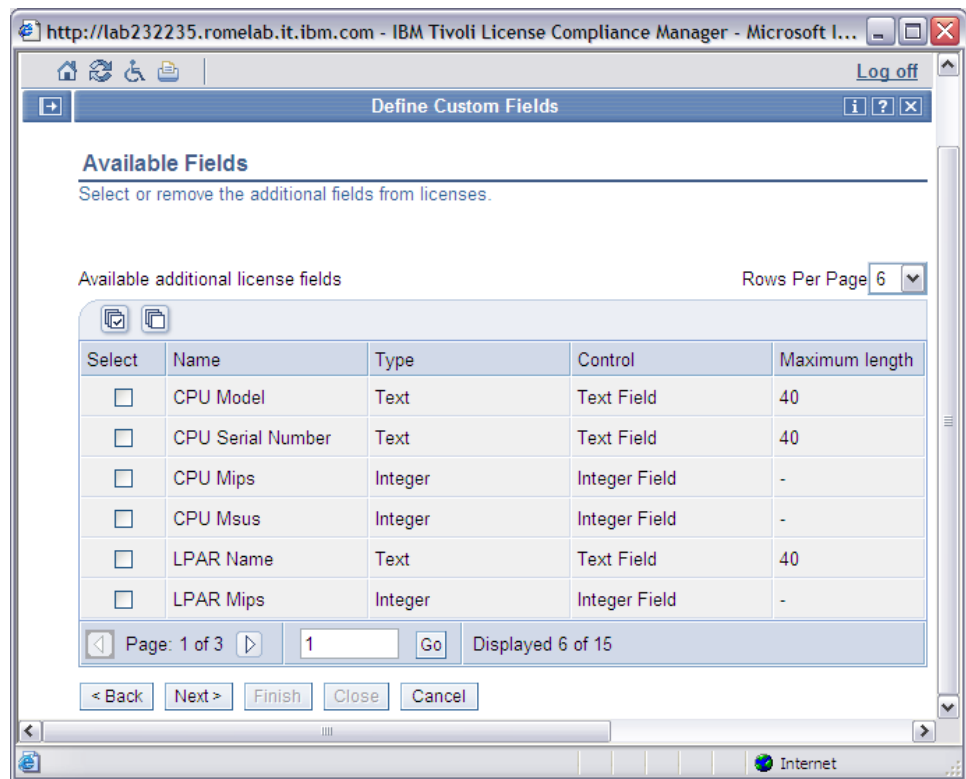
2. Select the additional fields you want to add. The columns of the table are:

    Select
    Select the fields you want to add. You can select more than one field.

    Name
    The name of the custom field.

    Type
    The type of data that is to be entered in the custom field.

    Control
    The type of custom fields, such as, text field, radio group, and so on.

    Maximum length
    The maximum length of the field.

3. Select the fields you want to add, and clear previously selected fields that you no longer require.

4. Click **Next**.
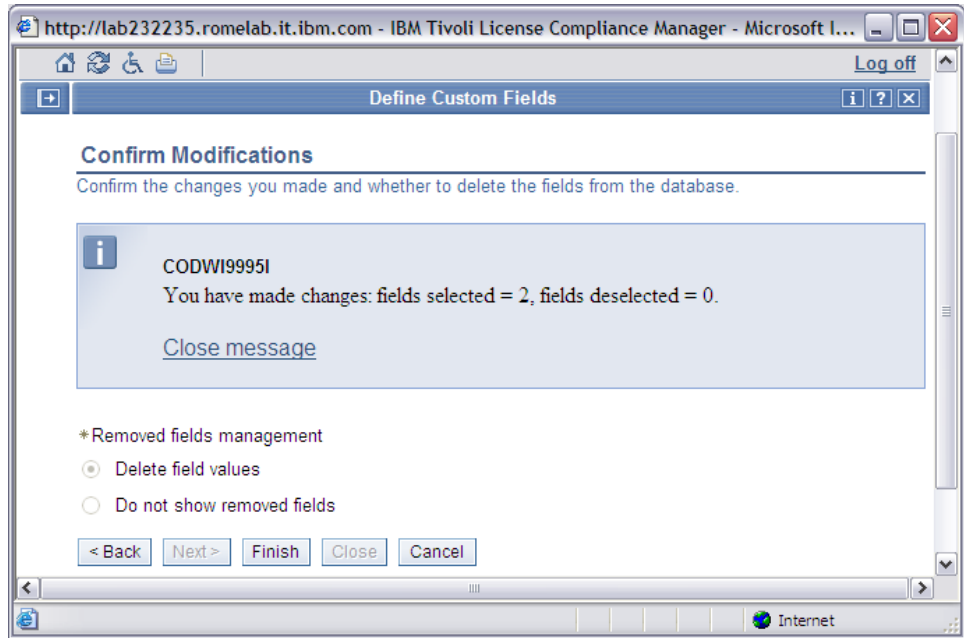
5. When you select to remove some of the fields, you must choose whether to delete the field values from the database, or hide them from the license view.

6. Click **Finish**.

Chapter 8. Managing complex products

These topics provide instructions for managing complex products.

Managing complex products is the responsibility of the **Administrator** for small organizations or the **Software Inventory Administrator** for large organizations.

Defining the mapping of a complex product

Follow this procedure to assign the components of a complex product to the appropriate agents.

Assume that you installed, or are planning to install, a component (shared by multiple complex products) on an agent. You need to define to which complex product the component belongs and link the component to the agent on which it is, or will be, installed.

To define the mapping of a complex product, perform the following steps:

1. In the portfolio, click **Manage Complex Products** and then click **Map Complex Products** in the expanded task group.
2. You can search for a complex product by completing the selection criteria as follows:

   Software vendor
   Select the software vendor of the product for which you want to define the mapping.

   SW platform
   Select the operating system of the product for which you want to define the mapping. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products marked with that operating system in the catalog.

   Product name
   To limit the selection criteria by product name matching, type part of a product name, preceded, followed, or surrounded by wildcard characters (%). All products that have names that match are available for selection on the next panel. Leave the field blank if you do not want to use product name matching.

   Products that have a license
   Select to limit the search to products that have already been assigned to a license.

   Products that have components installed
   Select to limit the search to products whose components are already installed.

   Products whose mapping has already been defined
   Select to limit the search to products that have already been mapped.
3. Click **Search**.
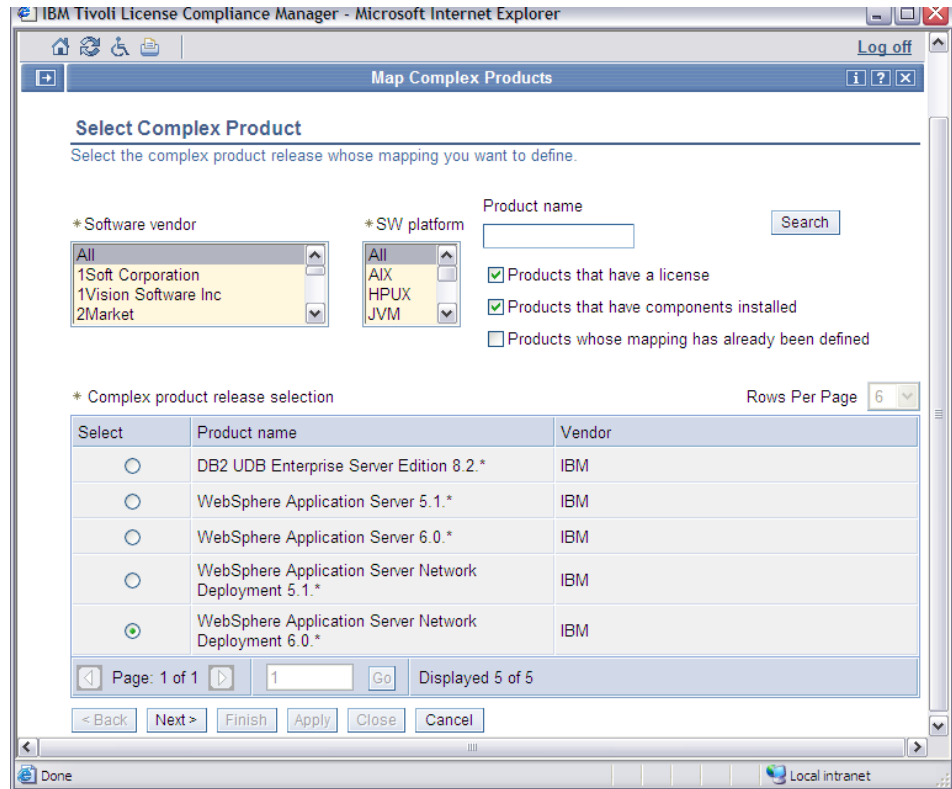
4. Select the complex product for which you want to define the mapping.

5. Click **Next**.

6. Expand the complex product tree to view the entire structure of the complex product.

7. In the tree structure, select the components on which you want to base your search. You can limit the selection criteria by selecting a division, an operating system, and the agent name.

8. Click **Search**. The Complex product current mapping table is populated with the current mappings defined for the selected components.
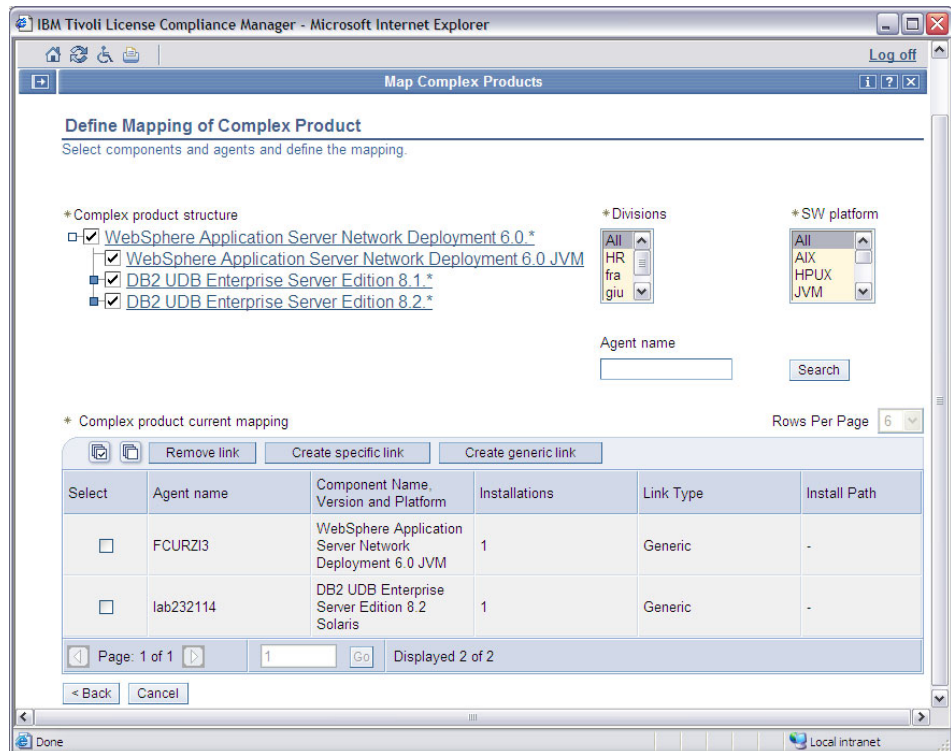
9. Choose one of the following actions:
   - To remove the link between a component and an agent, select an entry in the table and click **Remove link**.
   - To create new specific links between the selected components and specific agents, click **Create specific link**. Specific links define the relationship between a component and the agent on which the component is already installed in a specific installation path.
   - To create new generic links between the selected components and specific agents, click **Create generic link**. Generic links define the relationship between a component and the agent on which the component is installed (or will be installed) regardless of the installation path.
10. If, for example, you choose to create a new generic link, a panel similar to the following is displayed.
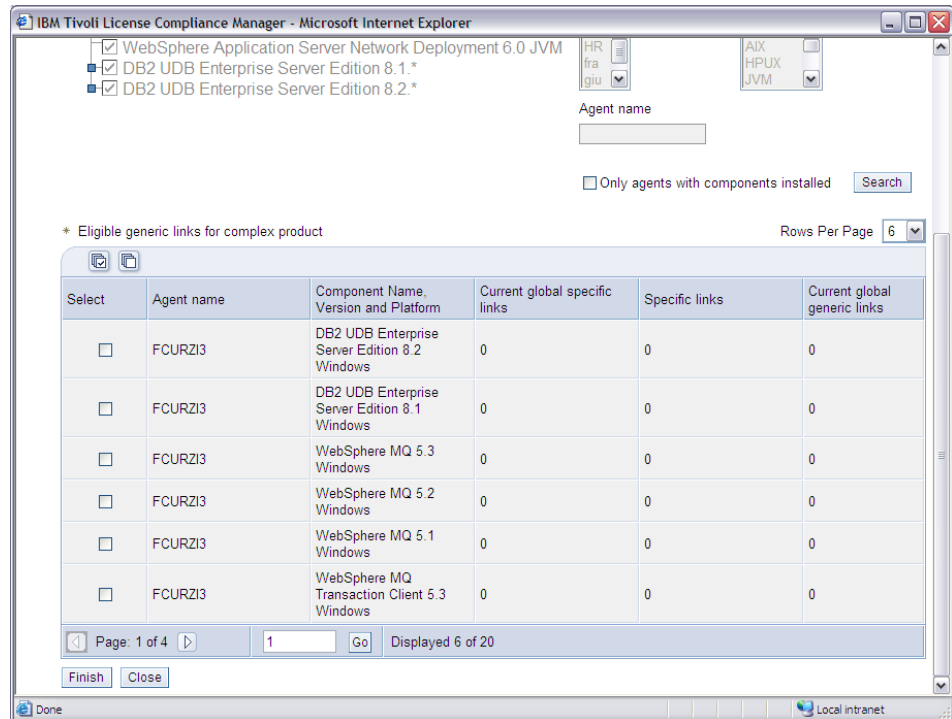
11. Select one or more entries in the Eligible generic links for complex product table. Click **Finish** to complete the creation of new generic links between specified components and their agents.

12. The previous panel is displayed again showing an updated Complex product current mapping table.

   Note: The Install Path column has a value only if the multi instance property is enabled.
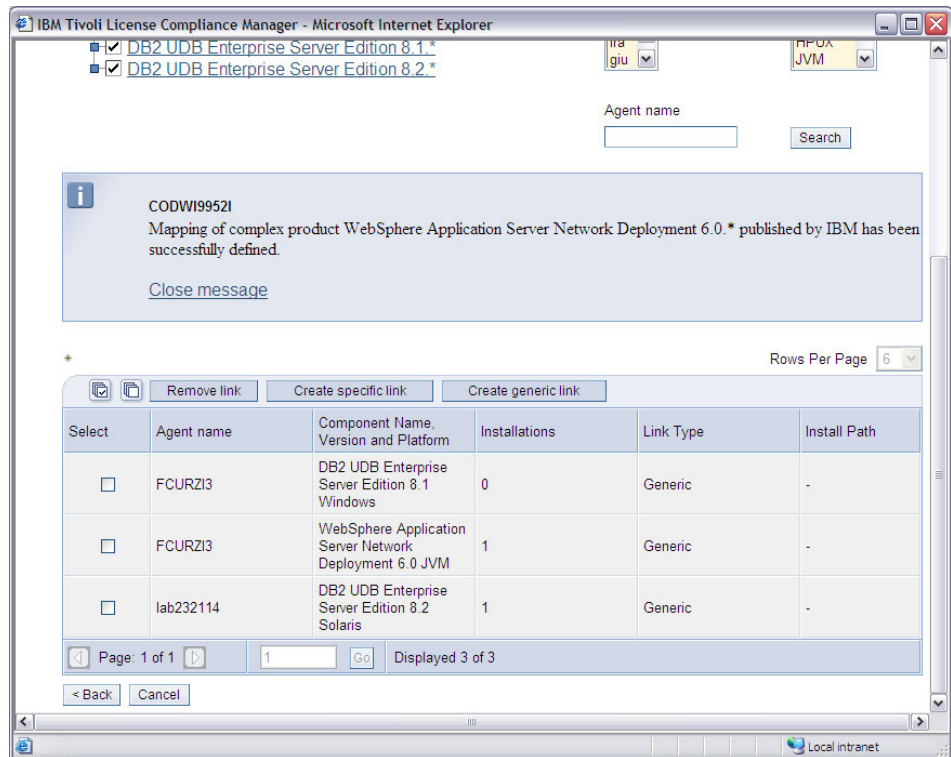
13. You can define additional new links or you can quit.

    Related concepts

    "Complex products, simple products, components" on page 6
    Tivoli License Compliance Manager can manage software products and their
    components.

    Related tasks

    "View the mappings" on page 101
    Follow this procedure to view the existing associations among complex
    products, their components, and the agents on which the components are
    installed.

    "Resolving unmapped components"
    Follow this procedure to assign unmapped components to the appropriate
    complex products.

Resolving unmapped components

Follow this procedure to assign unmapped components to the appropriate complex
products.

Assume that, during a software scan, Tivoli License Compliance Manager
discovered new instances of components that are potentially part of a complex
product, and that such components have not yet been assigned to a product. Tivoli
License Compliance Manager places the components in the list of unmapped
components until you, the **Software Inventory Administrator** for your
organization, assign them to the appropriate product.

To resolve unmapped components, perform the following steps:

1. In the portfolio, click **Manage Complex Products** and then click **Resolve
   Unmapped Components** in the expanded task group.

2. You can search for an unmapped component by completing the selection criteria as follows:

   Software vendor
   > Select the software vendor of the component that you want to search for.

   SW platform
   > Select the operating system of the component that you want to search for. Select UNIX if you want to search for components that are marked as UNIX components in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for components marked with that operating system in the catalog.

   Component name
   > To limit the selection criteria by component name matching, type part of a component name, preceded, followed, or surrounded by wildcard characters (%). All components that have names that match are available for selection on the next panel. Leave the field blank if you do not want to use component name matching.

   Show only use-based charged components
   > Select to limit the search to components that can be charged for their use.

3. Click **Search**.
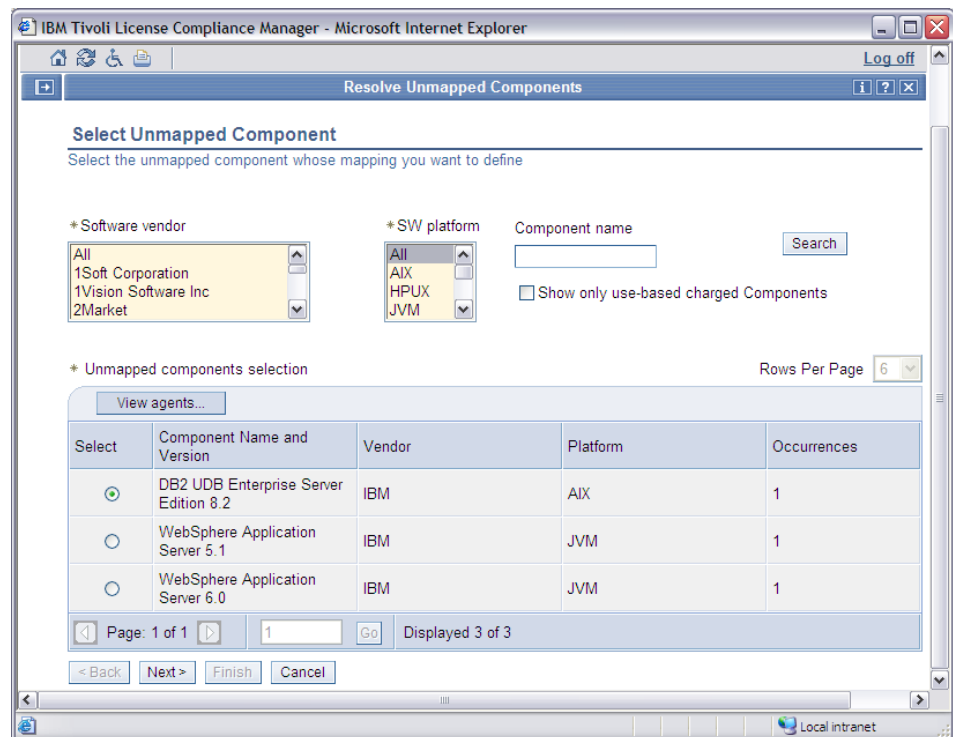
4. Select the unmapped component for which you want to define the mapping.
5. Click **Next**.
6. You can search for a complex product by completing the selection criteria as follows:

   Software vendor
   > Select the software vendor of the product for which you want to define the mapping.

   SW platform
   > Select the operating system of the product for which you want to define

the mapping. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products marked with that operating system in the catalog.

Product name
To limit the selection criteria by product name matching, type part of a product name, preceded, followed, or surrounded by wildcard characters (%). All products that have names that match are available for selection on the next panel. Leave the field blank if you do not want to use product name matching.

Products that have a license
Select to limit the search to products that have already been assigned to a license.

Products whose mapping has already been defined
Select to limit the search to products that have already been mapped.

7. Click **Search** to populate the Complex product release selection table.
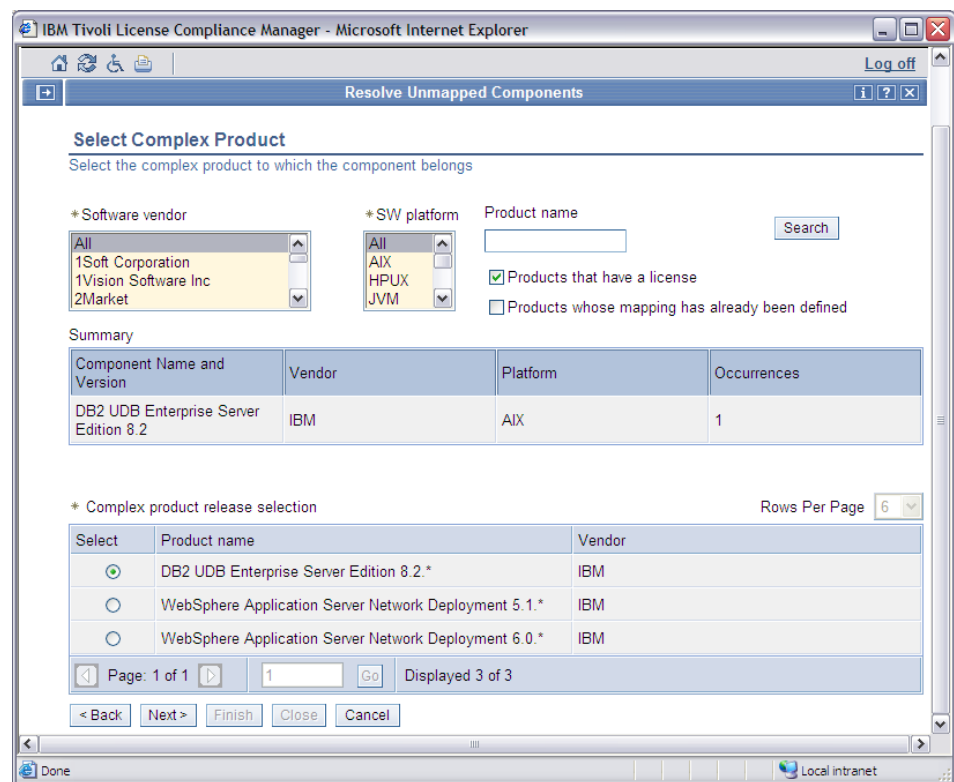
8. Select a complex product in the table and click **Next**.
9. Expand the complex product tree to view the entire structure of the complex product.
10. In the tree structure, select the unmapped component for which you want to define the mapping. You can limit the selection criteria by selecting a division, an operating system, and the agent name.
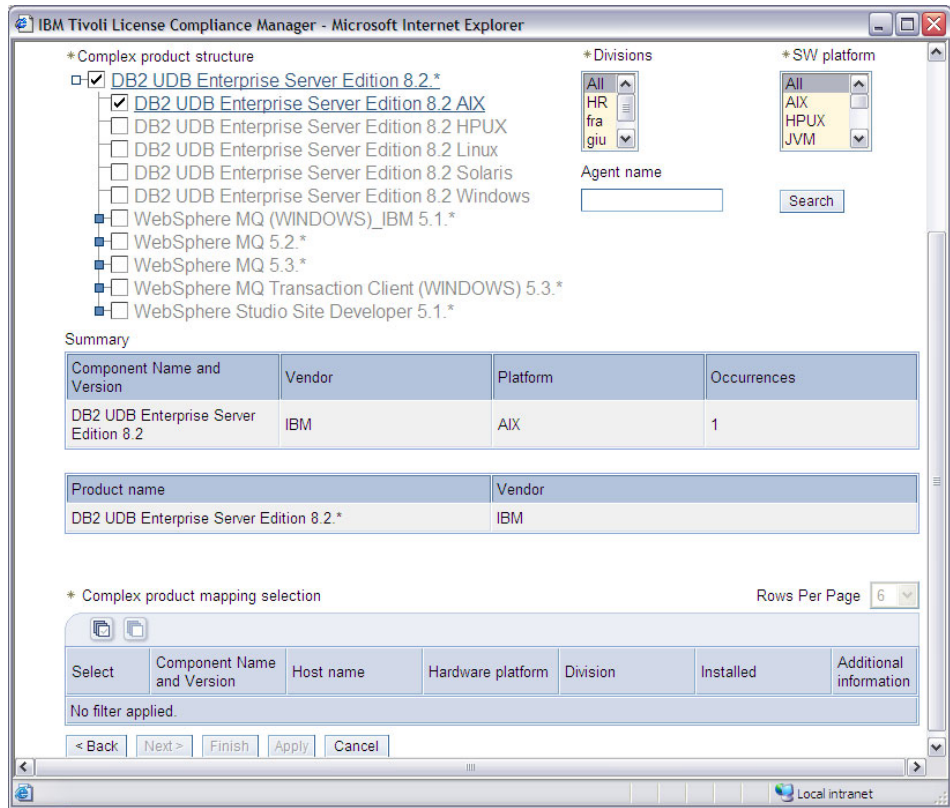
11. Click **Search**. The Complex product mapping selection table is populated with the eligible mappings for the specified component.
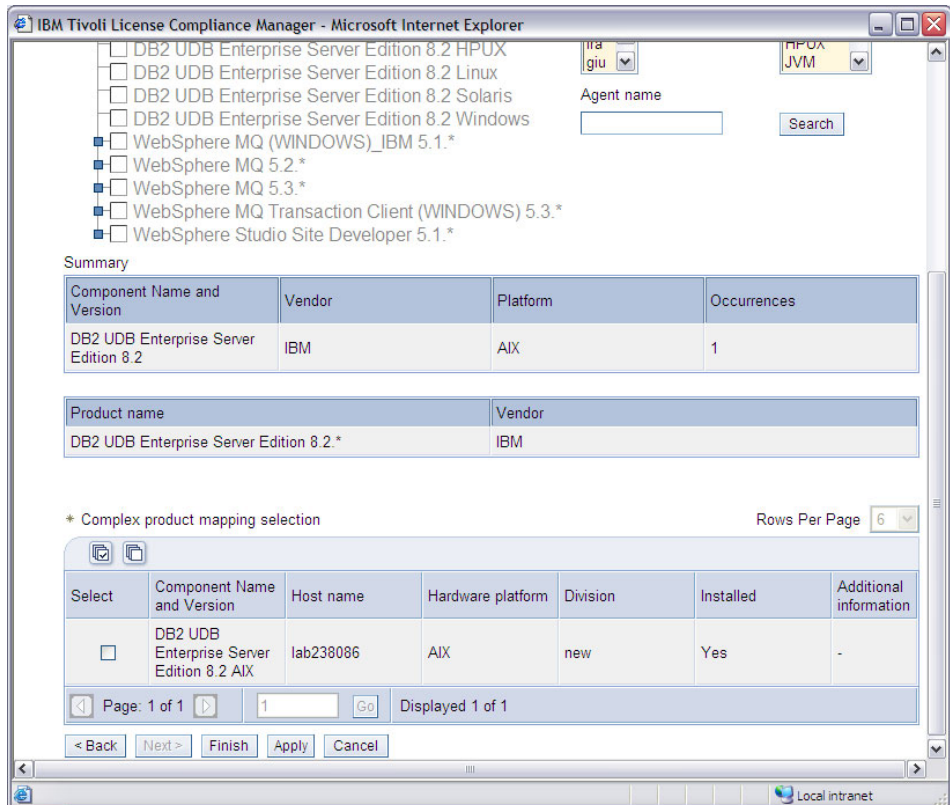
12. Select one or more entries in the Complex product mapping selection table. Click **Finish** to complete the association between the unmapped component and its agents.

Related concepts

"Complex products, simple products, components" on page 6
Tivoli License Compliance Manager can manage software products and their components.

Related tasks

"View the mappings"
Follow this procedure to view the existing associations among complex products, their components, and the agents on which the components are installed.

"Defining the mapping of a complex product" on page 93
Follow this procedure to assign the components of a complex product to the appropriate agents.

View the mappings

Follow this procedure to view the existing associations among complex products, their components, and the agents on which the components are installed.

To view the mappings, perform the following steps:

1. In the portfolio, click **Manage Complex Products** and then click **View Mappings** in the expanded task group.
2. You can limit the view by using the following selection criteria:

   Divisions
   Select the division whose agents you want to view.

   Agent platform
   Select the operating system of the agents that you want to view.

   Agent name
   To limit the selection criteria by agent name matching, type part of an agent name, preceded, followed, or surrounded by wildcard characters (%). Leave the field blank if you do not want to use agent name matching.

   Component name
   To limit the selection criteria by component name matching, type part of a component name, preceded, followed, or surrounded by wildcard characters (%). Leave the field blank if you do not want to use component name matching.

3. Click **Search**.
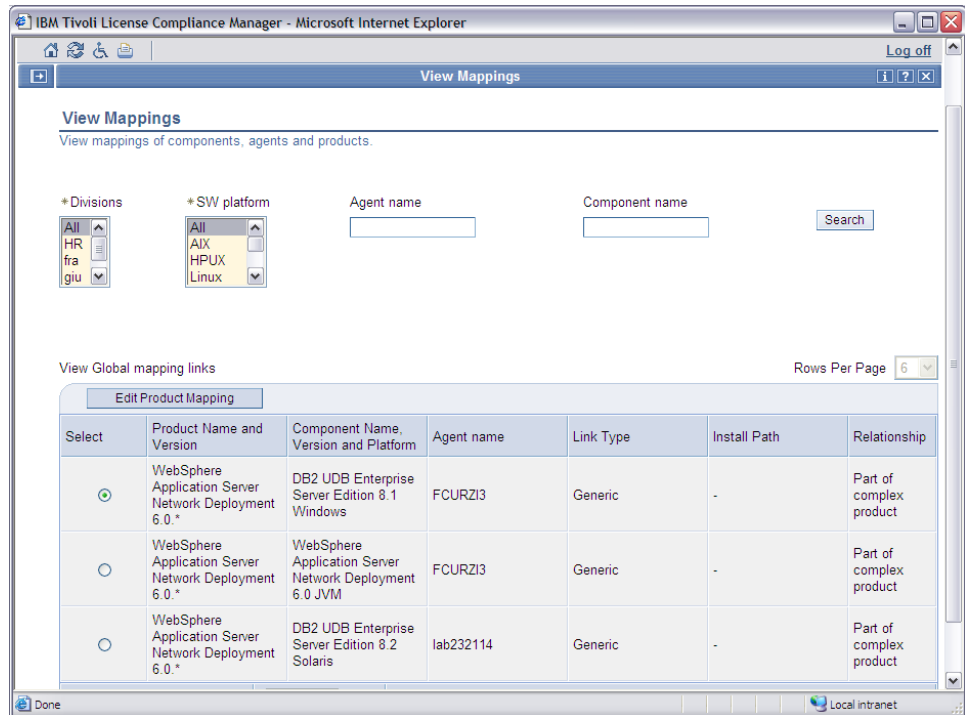
4. The View Global mapping links table shows the current mappings.

5. If you want to change the mapping for a component, select an entry in the table and click **Edit Mapping**. The Define Mapping of Complex Product table is displayed. See "Defining the mapping of a complex product" on page 93 to proceed.

   Related concepts

   "Complex products, simple products, components" on page 6
   Tivoli License Compliance Manager can manage software products and their components.

   Related tasks

   "Defining the mapping of a complex product" on page 93
   Follow this procedure to assign the components of a complex product to the appropriate agents.

   "Resolving unmapped components" on page 97
   Follow this procedure to assign unmapped components to the appropriate complex products.

Creating a license for a complex product

This topic provides a scenario that describes the creation of a new license for a complex product that is going to be installed.

A decision has been made to license WebSphere Application Server version 6.0. The License and Software Asset Manager requests an electronic entitlement from the License Management Support Web site and the Software Inventory Administrator determines where the product will be installed.

Figure 3 on page 103 shows the planned deployment of the new product and the other products that are currently installed in the environment.

DB2 UDB Data Warehouse
Enterprise Edition, version 8.2

WebSphere Application Server,
Version 6.0

DB2 UDB Enterprise Server Edition
Version 8.2

DB2 UDB
DW ESE
8.2 AIX

DB2 UDB
ESE 8.2
AIX

WebSphere
AS JVM 6.0

WebSphere
AS JVM 6.0

DB2 UDB
ESE v.8.2
AIX

Partition
La238238

Partition
La238239

Partition
La238240

Partition
La238241
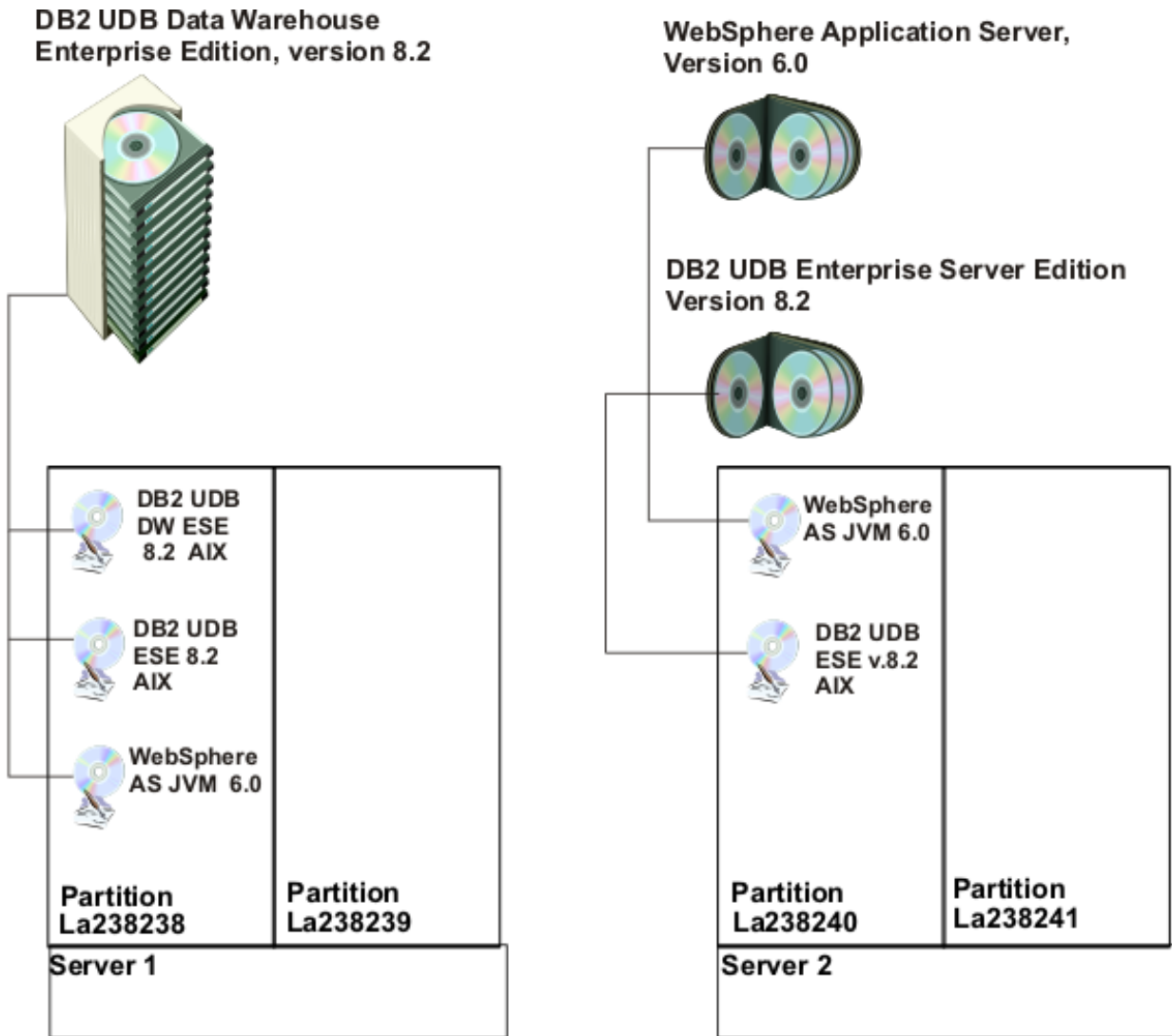
Server 1

Server 2

Figure 3. Planned deployment for WebSphere Application Server 6.0

The WebSphere AS JVM 6.0 component, which will be installed in partition
La238240, is already present in partition La238238 as part of the DB2 UDB Data
Warehouse product.

Currently, the only product owning this component is DB2 UDB Data Warehouse,
therefore the component installed in partition La238238 has been automatically
mapped to the Data Warehouse product.

Nevertheless, the definition of a license for WebSphere Application Server 6.0 will
enable discovery of the product with the result that when a new instance of the
component is installed, it will not be possible to automatically determine the
product to which the component should be mapped.

The following topics document the tasks required to ensure correct monitoring of
the new and existing product.

Creating the license

You have obtained an electronic entitlement from the License Management Support Web site and you want to create a license using the entitlement.

To create the license, perform the following steps:

1. Log on to the Web UI as a **License and Software Asset Manager** or as an **Administrator**.
2. In the portfolio, click **Manage licenses**.
3. In the Search for Licenses panel, click **Create from file**.
4. Type the path name of the electronic entitlement file or click **Browse** to select the file. Click **Next**.
5. In the Create or Modify License panel, complete the remaining information. The Vendor, Product ID, Product name, and License type are taken from the electronic entitlement and cannot be changed. Click **OK**.

Mapping shared components

The next task is to define the mapping to resolve the ownership of the shared component.

Now that you have created the license for WebSphere Application Server version 6.0, any new instance of the WebSphere AS JVM 6.0 component has two potential owners: WebSphere Application Server version 6.0 and DB2 UDB Data Warehouse version 8.2.

Instead, no further action is needed for the currently installed instance of the WebSphere AS JVM 6.0 component because this instance was automatically mapped to DB2 UDB Data Warehouse when the component had only one potential owner.

For the new instance, you must use the Map Complex Product task to provide the information needed to resolve the ownership of the shared component.

To map the shared component, perform the following steps:

1. In the portfolio, click **Manage Complex Products ▶ Map Complex Products**.
2. In the Select Complex Product panel, clear the **Product that have components installed** check box. Search for the WebSphere Application Server product, select it, and click **Next**.
3. In the Define Mapping of Complex Product panel, click **Create generic link**.
4. In the table, select the Websphere Application Server 6.0 JVM component on agent La238240. Click **Finish**.

Chapter 9. Scheduling a software scan

To enable the agents to collect software use information from the computers where they are deployed, they must perform a scan of the installed software.
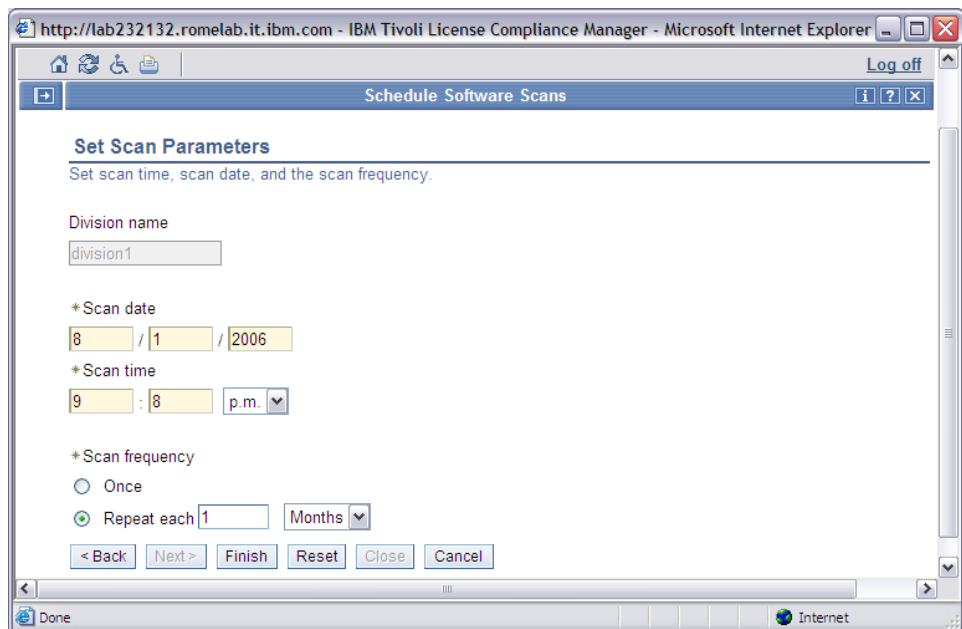
Only software that is detected by such a scan can be monitored. For this reason, if you install or upgrade software that needs to be monitored, you must ensure that a new scan is performed.

Note: A scan is automatically performed when an agent is deployed. Software scans are not performed on i5/OS agents because these agents already maintain inventory information.

You can perform a software scan only if you are an **Administrator** or **Software Inventory Administrator**.

To schedule a software scan for a division, perform the following steps:

1. In the portfolio, click **Schedule Software Scans**.
2. Filter for the division with which you want to work using the **Division name** field, and click **Search** to populate the divisions table.
3. Select a division from the table and click **Next**.

4. Complete the requested information, as follows:

   Scan date
   Specify the date on which the first scan is to be made.

   Scan time
   Specify the time at which the first scan is to be made.

   Note: The time refers to the time zone for the location of the nodes in the selected division.

Scan frequency

Define the frequency of the scan.

If the values you just provided are to be used for a single software scan, select **Once**. If the values are to be used for a regular schedule of software scans, select **Repeat Each**, type a number in the text box, and then select a time period from the drop-down list. For example, to perform a scan every two weeks, type **2** in the text box and select **Weeks** from the list.

Note: Daily scans are useful only for small installations, that is, less than 1000 agents for each runtime server.

5. Click **Finish**.

Chapter 10. Reporting software use and installation information

These topics provide instructions for producing software use and software inventory reports.

The content in a report depends on the settings of the product properties (monitoring, discovery, and multi-instance). Moreover, the software use reports are directly related to settings in the system.properties file. See *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*, for information about system.properties settings. The information that you can view in reports is also directly affected by the privacy policy settings made for your user profile. See "Defining user profiles" on page 37, for more information.

To produce reports, you should be logged on to the administration server as **Administrator**, **Software Resources Manager**, or **License and Software Asset Manager**. To produce a software installations snapshot report, you can also be logged on to the administration server as **Software Inventory Administrator**.

You can view a report using the Web UI as soon as the report has been generated, or you can choose to have a report generated using batch processing.

> **Related concepts**
> "Reporting" on page 8
> Reports of inventory and software use information are available on the administration server.

Producing a software installations snapshot report

The software installations snapshot report provides a view of the products installed on monitored computers at a specified date and time.

You can schedule software scans on the nodes in a division where software is installed and then produce a report based on the results of the scan you scheduled. The installations snapshot report wizard consists of three panels where you can define parameters for the report, and customize the report to show:

- Specified versions of products or releases
- Products supplied by selected vendors
- Products that supports specified operating systems
- Complex or simple products, or both
- Products that have been replaced in the catalog
- Products monitored by specified agents

Based on your selections, the generation of an installations snapshot report can take quite some time, therefore, you might choose to generate the report using batch processing.

When an administration server manages a large number of agents (for example, several thousands), the installations snapshot report can be very large if many products and agents are selected. The generation of a very large report can affect the scalability and performance of the administration server, therefore, when the

selection of products and agents is such that the report would be too large, the batch report is not generated or its generation fails. Under these circumstances, the status of the batch report is *too complex* or *failed*. To bypass the problem, you should select a smaller number of products or agents.

Requesting a software installations snapshot report

You can produce the report in either product or agent order and specify the date and time for which inventory information is to be reported.

To produce a software inventory report, perform the following steps:

1. In the portfolio, click **Produce Reports** and then click **Installs Snapshot** in the expanded task group. You can limit the products that can be selected for inclusion in the report from the **Product selection** table.
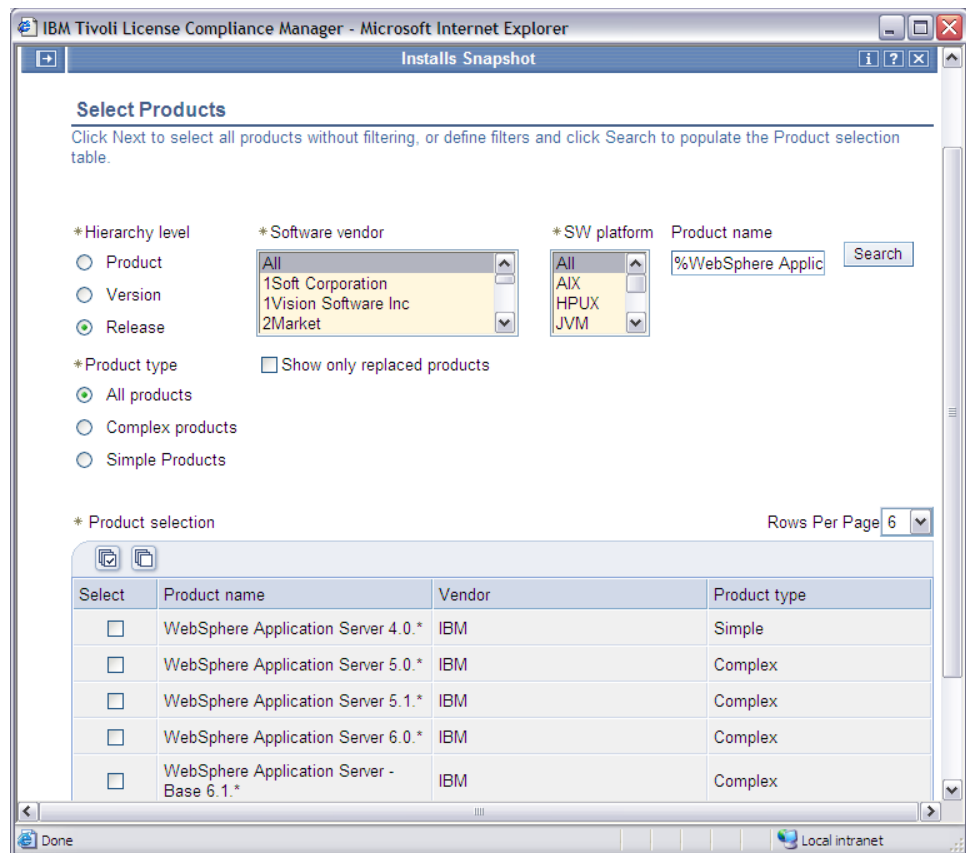
2. Use the following filters to limit the entries in the **Product selection** table, and click **Search**:

   Hierarchy level
   Select the level of product hierarchy you want the report to cover.

   Software vendor
   Select **All** to search for products from all vendors or select one or more vendors to limit selection to products supplied by those vendors.

   SW platform
   Select **All** to search for products supporting all operating systems or select one or more operating systems to limit selection to products supporting those operating systems. Select UNIX if you want to search for products that are marked as UNIX products in the catalog: if you select a specific

UNIX operating system (for example, AIX), the filter searches for products that result for that operating system in the catalog.

Product name

To limit the products available for selection using product name matching, type a part of a product name preceded, followed, or enclosed by wildcard characters (%). All products that have names that match are included in the Product selection table. Leave the field blank if you do not want to use product name matching.

Product type

Select **Complex products** or **Simple products** to limit selection to that product type.

Show only replaced products

Select to limit selection to products that have been replaced in the catalog. The products replaced in the catalog are not removed, but are kept in the catalog as historical data.

3. Select the product or products in the product selection table for which you want to produce the report.

4. Click **Next** to move to the Select Agents panel. If you click **Next** without filtering, no product filters are applied.

5. Use the following filters to limit the entries in the **Agent selection** table, and click **Search**:

Division

Select the division to which the agents are registered.

Agent platform

Select **All** to search for agents supporting all operating systems or select one or more operating systems to limit selection to agents supporting those operating systems.

Agent name

Type the partial or complete host name to search for specific agents.

6. Select the agent or agents in the Agent selection table to include in the report. When the privacy policy settings do not allow agent selection, the Select Divisions panel is displayed. Complete the Select Divisions panel as follows:

Division

Select the division where the agents of the product run.

Search

Click **Search** to populate the Divisions table with divisions according to your selection criteria.

Division selection table

Select the division or divisions of the agents where the product runs.

7. Click **Next**. The Set Report Parameters panel is displayed.

8. Set the parameters for the report. The following parameters are available:

Snapshot date

Type the date you want the report to start. The default date is the last usable date: if you type a date later than the default, the date is not accepted.

Snapshot time

Type the time of the snapshot.

Time zone
>   Select the time zone of the date you entered.

Order by
>   Select whether to group the report according to products or agents.

Detail level
>   Select whether the report should be a summary or full report.

9. Click **Browse report** to view the report immediately, or click **Export data** to generate the report using batch processing.

>   **Note:** The sequence of the **Product Installs** and **Agent Installs** panels depends on whether you selected to view the report according to products or agents.

Related tasks

"Exporting reports" on page 131
The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Navigating a software installations snapshot report

This topic shows you how to navigate the report.

Figure 4 shows a software inventory report, grouped by product. The report type depends on whether you chose to group the report by products or agents. Figure 6 on page 112 shows a software inventory report, grouped by agents.
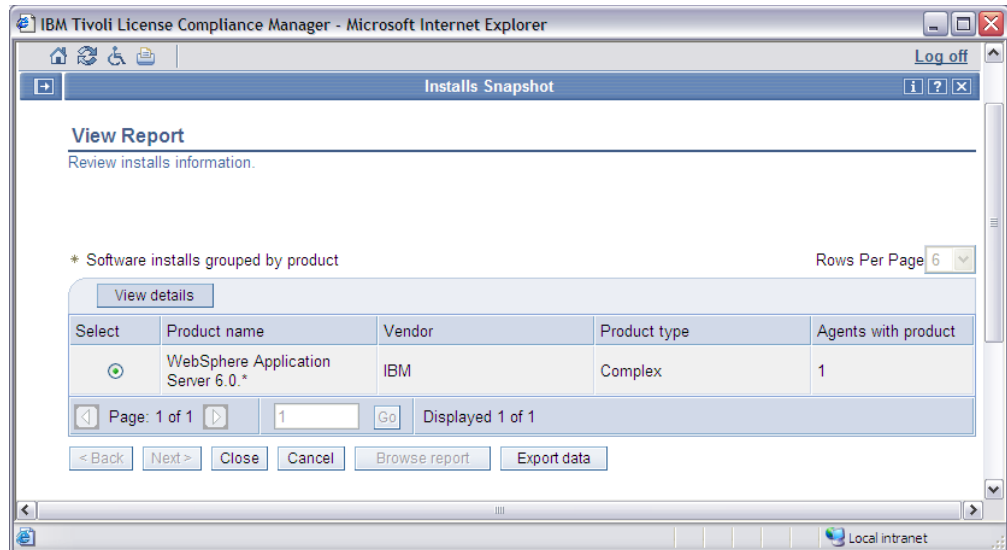
Figure 4. Software inventory grouped by product

The software installations grouped by product consists of the following information:

Select
>   Select a product in the table and click **View details** to view the details of that product.

Product type
>   Whether the product is a simple or complex product.

Product name
> The name of the products according to the filtering you performed in the previous panels.

Vendor
> The vendor of the products according to the filtering you performed in the previous panels.

Agents with product
> The number of agents that have the product installed.

You can choose to export the report data using batch processing by clicking **Export data**. See "Exporting reports" on page 131 for more details.

Note: If the report does not include products that you know are installed on monitored nodes, take account of the following:

- There is a time delay between the software scan and the availability of the new inventory information on the administration server. For details of parameters that affect the time delay, see the description of the system.properties configuration file in the *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

- The inventory report only includes products that have entries in the master catalog.

Return to the panel where you set the report parameters by clicking **Close**.

Click **View details** to view the details of the products or agents, depending on your previous selection.

Figure 5. Software inventory grouped by product details

The software install details grouped by product details table consists of the following information:

Agent name
    The name of the computer where the agent is installed.

Operating system
    The name of the operating system where the agent is installed.

Product name and version
    The name and version of the product that was discovered.

Component name and version
    The name and version of the component that was discovered.

Install path
    If the multi-instance property was enabled, this is the file system path on the agent where Tivoli License Compliance Manager found the inventory signature for the selected product.

Scan date (GMT)
    The last time that a scan was performed on the agent in GMT.

You can choose to export the report data using batch processing by clicking **Export data**. See "Exporting reports" on page 131 for more details.

Figure 6 shows a software inventory report, grouped by agents.
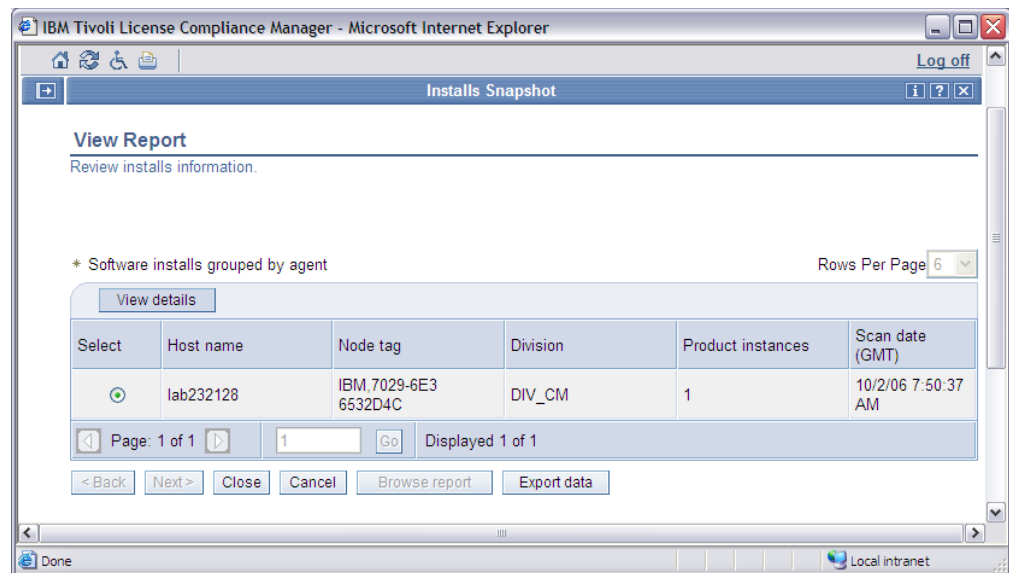
Figure 6. Software inventory grouped by agent

The **Software installs grouped by agent** table consists of the following information:

View details
    Select an agent in the table and click **View details** to view detailed information about that agent.

Select
    Select an agent in the table and click **View details** to view detailed information about that agent.

Host name

The name of the computer where the agent is installed.

Node tag

A textual string used to identify the computer where the agent is installed, such as the computer label.

Division

The name of the division to which the agent belongs.

Product instances

The number of different instances of the product that have been detected by the agent.

Scan date (GMT)

The last time that a scan was performed on the agent in GMT.

You can choose to export the report data using batch processing by clicking **Export data**. See "Exporting reports" on page 131 for more details.

Return to the previous panel where you set the report parameters by clicking **Close**.
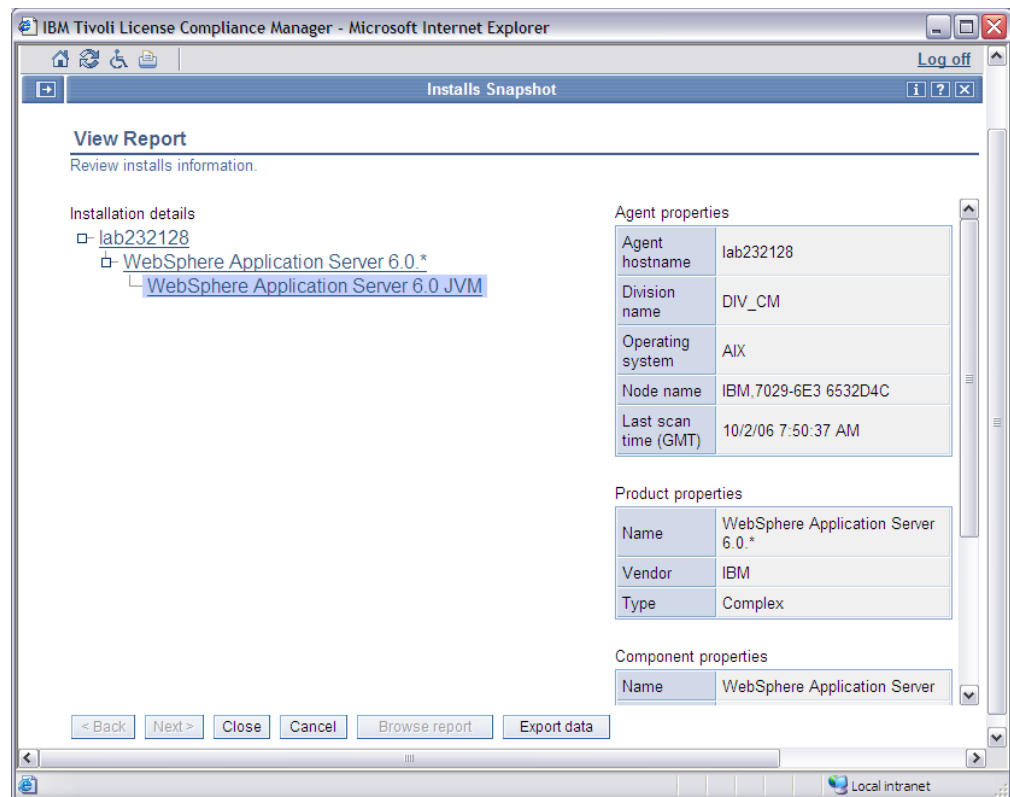
Figure 7. Software inventory grouped by agent details

The software install grouped by agent details consists of the following information:

Installation details

A graphical representation of the products installed on the agent. Expand the

structure to view a list of the products installed, then expand the structure of a product and click on a product or component name to view the product or component properties.

Agent properties
A table showing various agent properties, including the division to which the agent belongs, and the date and time of the last software scan on the agent.

You can choose to export the report data using batch processing by clicking **Export data**. See "Exporting reports" on page 131 for more details.

Producing a license use trend analysis report

The license use trend analysis report provides a graphical representation of trends in the use of a selected license during a specified period.

The report includes a chart that can be in one of the following formats:

Step format
The number of days during which licenses were in use is shown as filled blocks. An increase or decrease in the use for a period of time is displayed in the report as a step up or down from the previous use level.

Line format
The periods of time during which licenses were in use are joined, showing the increase or decrease in use.

Requesting a license use trend analysis report

The license use trend analysis report wizard consists of two panels where you can define parameters for the report.

To produce a license use trend analysis report, perform the following steps:

1. In the portfolio, click **Produce Reports** and then click **License Use Trend** in the expanded task group. Use this panel to limit the licenses that are displayed in the **Licenses** table.
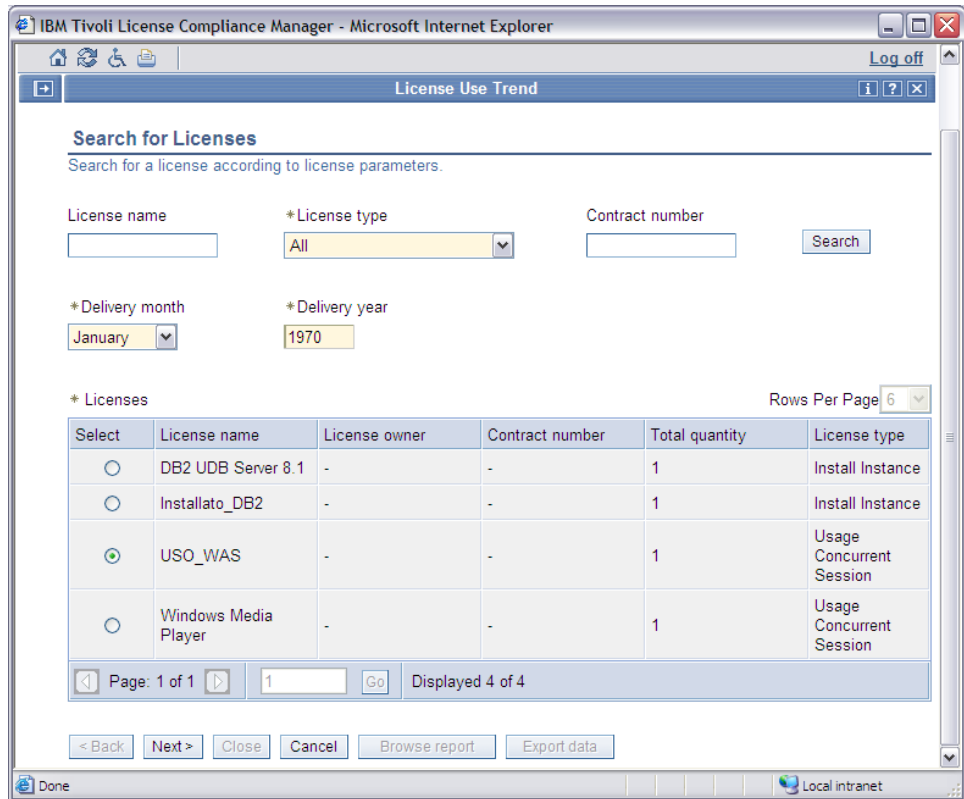
2. Use the following filters to limit the entries in the **Licenses** table, and click **Search**:

   Search for existing licenses using any of the following criteria:

   License name
   : Type the name that was associated with the license when it was created.

   License type
   : Select the type of license.

   Contract number
   : Type the number of the contract associated with the license.

   Delivery month
   : Select the month during which the software to which the license relates was delivered.

   Delivery year
   : Type the year during which the software to which the license relates was delivered.

3. Select the license on which you want to report from the Licenses table.

4. Click **Next** to open the Set Report Parameters panel.

   Complete the panel as follows:

   Start date
   : Type the date you want the report to start.

   End date
   : Type the date you want the report to end. The default date is the last usable date: if you type a date later than the default, the date is not accepted.

Chart type

Select whether you want the chart to be a line or step chart. You can change the chart type after the report has been generated.

5. Click **Browse report** to view the report immediately or click **Export data** to generate the report using batch processing.

Related tasks

"Exporting reports" on page 131
The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Viewing a license use trend analysis report

This topic shows a chart from the license use trend analysis report in step format.

The chart plots licenses used against time, over the period you specified. In line format, the periods of time are joined, showing the increase and decrease in use.

Note: Use levels from licenses that have been deleted are not included.
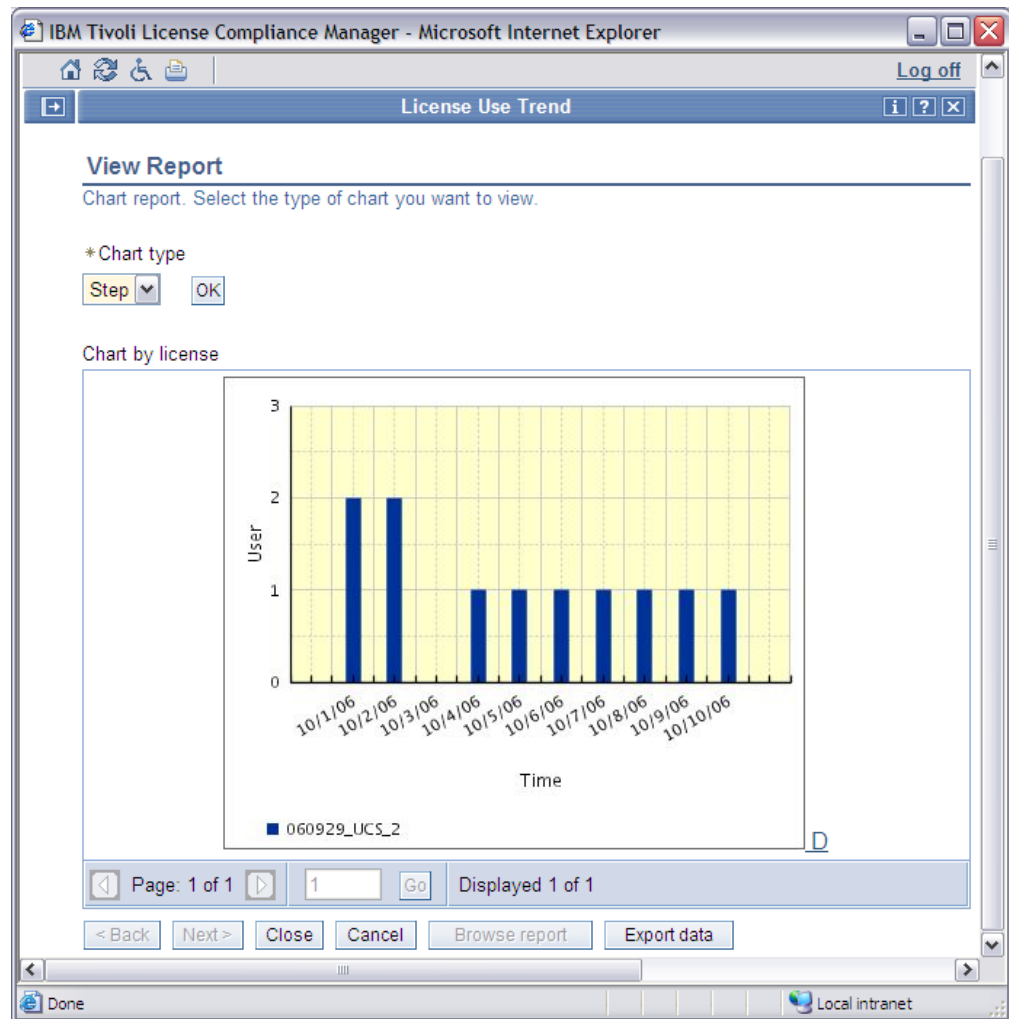
Figure 8. Sample license use trend analysis report

You can navigate the report, change the content, or change the presentation:

- If the report includes more than one chart, click the back and forward arrows or type a page number and click **Go**.
- Export the current chart in XML format by clicking **Export data**.
- Change the format of the chart, by selecting from the Chart Type list.

  Available formats are **Step** and **Line**. Step format is shown in Figure 8 on page 116. Line format shows the different levels connected by a line showing the trend of the change in use.
- Show a description of the chart by clicking the **D** link, used to make the chart accessible. The chart description is a sample of the data used to generate the chart. If you want to review the complete data used to generate the chart, you should export the report.

Producing a product use trend analysis report

The product use trend analysis report provides a graphical representation of trends in the use of a selected product during a specified period.

You can request a report that shows the use of a selected product on all agents of one or more divisions. The report includes a chart that can be in one of the following formats:

Step format
> The number of days during which product sessions were in use are shown as filled blocks. An increase or decrease in the use for a period of time is displayed in the report as a step up or down from the previous use level

Line format
> The periods of time during which product sessions were in use are joined, showing the increase and decrease in use

Requesting a product use trend report

The product use trend analysis report wizard consists of three panels where you can define parameters for the report.

To produce a product use trend analysis report, perform the following steps:

1. In the portfolio, click **Produce Reports** and then click **Product Use Trend** in the expanded task group. Use this panel to limit the products that are displayed in the **Product selection** table.
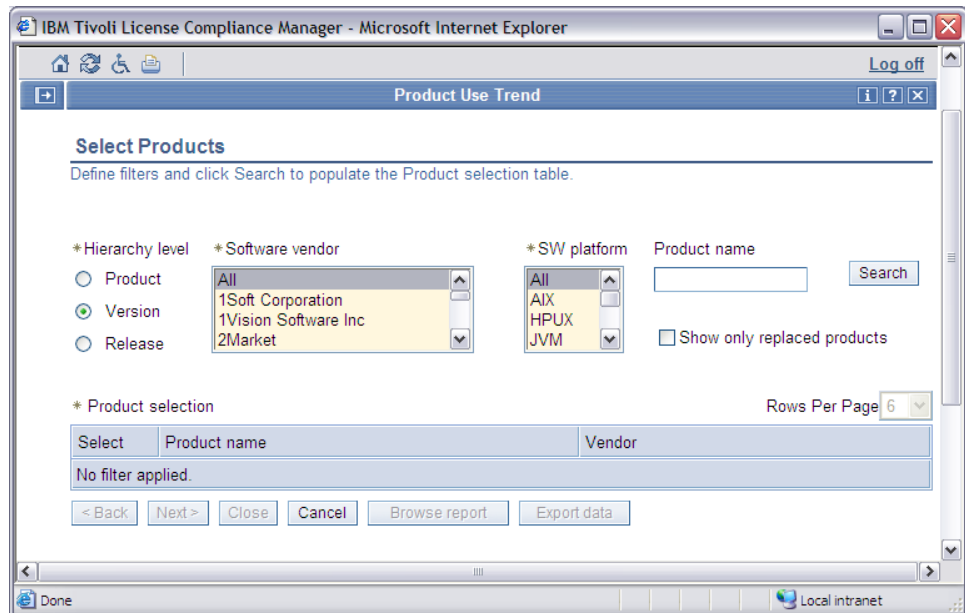
2. Use the following filters to limit the entries in the **Product selection** table, and click **Search**:

Hierarchy level
Select the level of product hierarchy you want the report to cover.

Software vendor
Select **All** to search for products from all vendors or select one or more vendors to limit the search to products supplied by those vendors.

SW platform
Select **All** to search for products supporting all operating systems or select one or more operating systems to limit the search to products supporting those operating systems. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products that are marked with that operating system in the catalog.

Product name
To limit the products available for selection using product name matching, type a part of a product name preceded, followed, or enclosed by wildcard characters (%). All products that have names that match are included in the Product selection table. Leave the field blank if you do not want to use product name matching.

Show only replaced products
Select to limit the search to products that were replaced in the catalog. The products replaced in the catalog are not removed, but are kept in the catalog as historical data.

3. Select the product on which you want to report from the Product selection table.

4. Click **Next** to open the Select Divisions panel.

   Type a division name if you want to limit the search to a specific division, or leave the field blank if you want to search for all divisions. Click **Search**.

5. In the Division selection table, select the division or divisions of the agents where the product runs.

6. Click **Next** to open the Set Report Parameters panel.

Complete the panel as follows:

Start date
Type the date you want the report to start.

End date
Type the date you want the report to end. The default date is the last usable date: if you type a date later than the default, the date is not accepted.

Chart type
Select whether you want the chart to be a line or step chart. You can change the chart type after the report has been generated.

7. Click **Browse report** to view the report immediately or click **Export data** to generate the report using batch processing.

Related tasks

"Exporting reports" on page 131
The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Viewing a product use trend analysis report

This topic shows a chart from the product use trend analysis report in step format.

The chart plots products used against time, over the period you specified. In line format, the periods of time are joined, showing the increase and decrease in use.
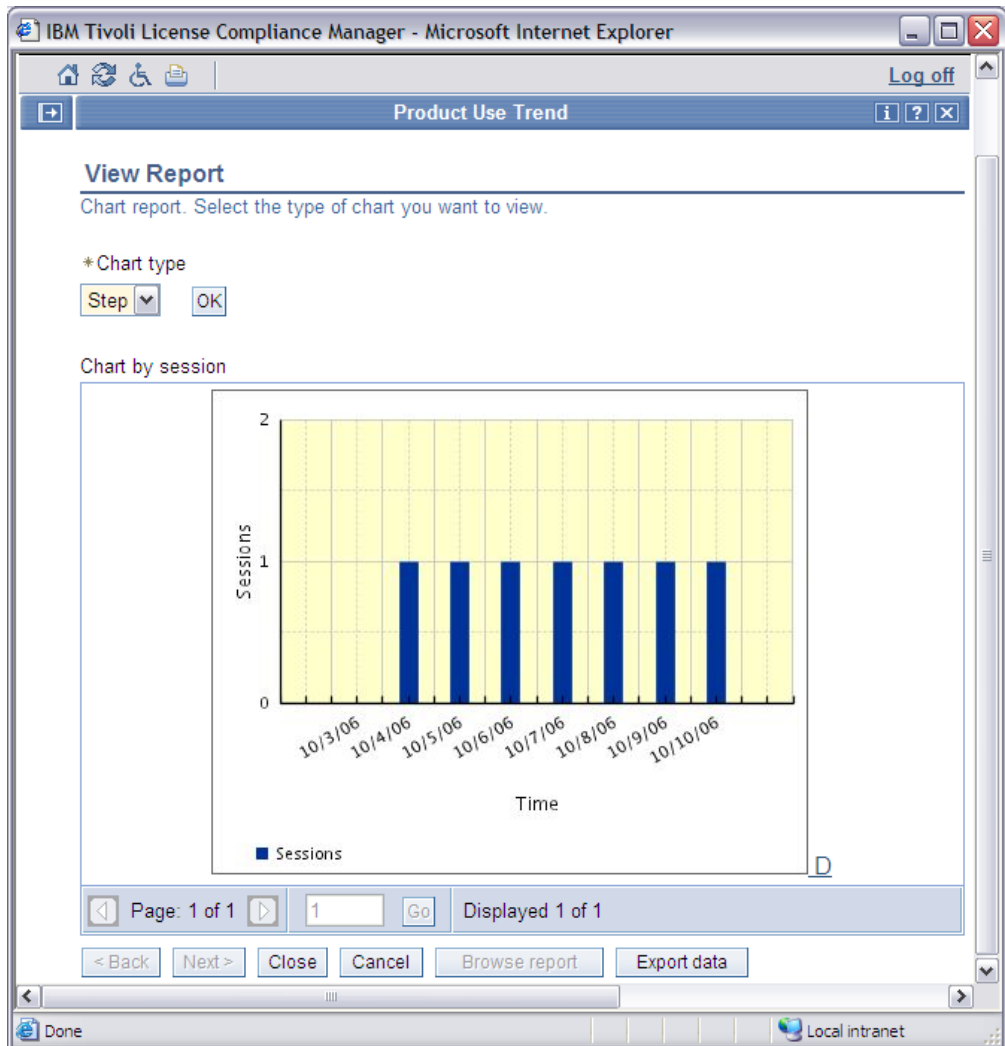
Figure 9. Sample product use trend analysis report

You can navigate the report, change the content, or change the presentation:

- If the report includes more than one chart, click the back and forward arrows or type a page number and click **Go**.
- Export the current chart in XML format by clicking **Export data**.
- Change the format of the chart by selecting from the Chart Type list.

  The available formats are **Step** and **Line**. Step format is shown in Figure 9. Line format shows the different levels connected by a line showing the trend of the change in use.
- Show a description of the chart by clicking the **D** link, used to make the chart accessible. The chart description is a sample of the data used to generate the chart. If you want to review the complete data used to generate the chart, you should export the report.

Producing a product use level analysis report

The product use level analysis report provides a view of the level of use of products during a specified period.

You can limit the report to include products with use above a specified level or to products with use below a specified level

The level analysis report wizard consists of three panels where you can define parameters for the report, and customize the report to show:

- Specified releases of products
- Products supplied by a specified vendor
- Products installed on a specified operating system
- Products that were replaced in the catalog

You can sort the report either in product order or in descending order of use level.

To produce a product use level analysis report, perform the following steps:

1. In the portfolio, click **Produce Reports** and then click **Product Use Level** in the expanded task group. Use this panel to limit the products that can be selected for inclusion from the **Product selection** table.

2. Use the following filters to limit the entries in the **Product selection** table, and click **Search**:

   Hierarchy level
   Select the level of product hierarchy you want the report to cover.

   Software vendor
   Select **All** to search for products from all vendors or select one or more vendors to limit the search to products supplied by those vendors.

   SW platform
   Select **All** to search for products supporting all operating systems or select one or more operating systems to limit selection to products supporting those operating systems. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products marked with that operating system in the catalog.

Product name
To limit the products available for selection using product name matching, type a part of a product name preceded, followed, or enclosed by wildcard characters (%). All products that have names that match are included in the Product selection table. Leave the field blank if you do not want to use product name matching.

Show only replaced products
Select to limit the search to products that were replaced in the catalog. The products replaced in the catalog are not removed, but are kept in the catalog as historical data.

3. Select the products on which you want to report from the Product selection table.

4. Click **Next** to open the Select Divisions panel.

5. Type a division name, or leave the field blank to search for all divisions. Click **Search**.

6. In the Division selection table, select the division that you want to view in the report. You can select **All divisions** if you want the report to show all divisions.

7. Click **Next** to open the Set Report Parameters panel. The report parameters that you select depend on the settings of the administration server. For example, the default report **End date** is the last time the data was aggregated by the server.

8. Set the parameters of the report, as follows:

Products that have
Select whether the report should report high-water mark or average use levels greater than or less than the threshold you select.

Include unused products
Select whether you want the report to include products that have never been used.

Start date
Type the date you want the report to start.

End date
Type the date you want the report to end. The default date is the last usable date: if you type a date later than the default, the date is not accepted.

Sort by
Select whether the report should be sorted by product or by high-water mark or average use.

Figure 10 on page 123 shows a product use level analysis report showing the high water mark levels for the selected products, sorted by product name.
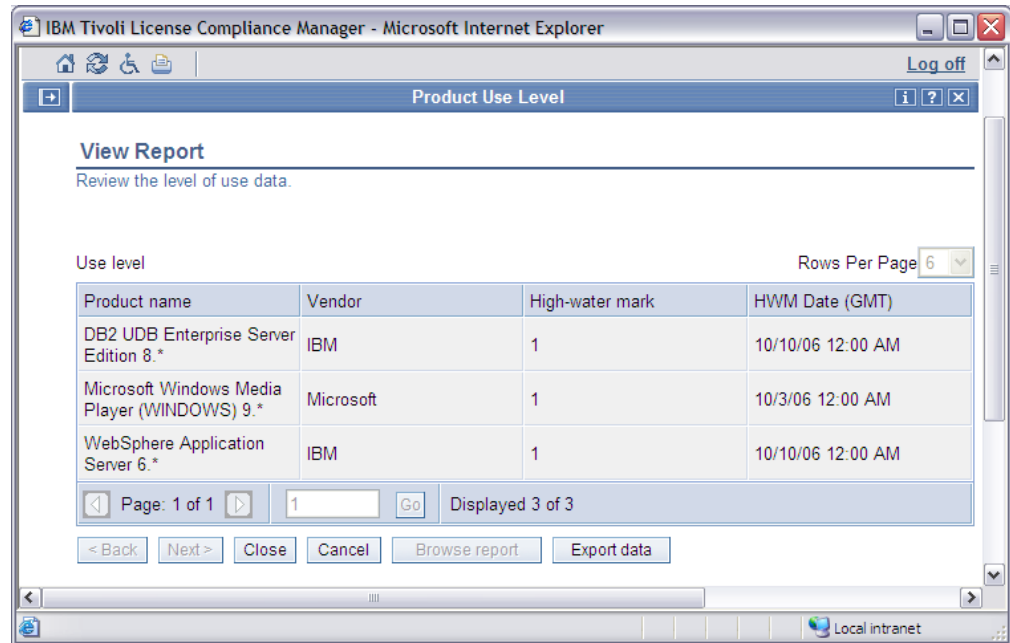
Figure 10. Product use level analysis report

The report table consists of the following information:

Product name
The name of the products according to the filtering you performed in the previous panels.

Vendor
The vendor of the products according to the filtering you performed in the previous panels.

High-water mark/Average use
The high-water mark or average use value.

HWM date
The date on which the high-water mark of average use value was recorded.

You can choose to export the report to a file by clicking **Export data**.

If the report extends over more than one page, you can use the paging controls at the bottom of the current page to display further pages of the report.

> **Related tasks**
>
> "Exporting reports" on page 131
> The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Producing a license compliance report

The license compliance report provides a view of the license use status at a specified time.

The report shows the quantity of licenses available and the quota used for each license at the specified time. The report includes only licenses that are valid at the specified time. It also provides a high-water mark value, indicating the highest

level of use during a selected period leading up to the specified time. This helps you to identify out-of-compliance situations and under use of licenses.

To generate the license compliance report, perform the following steps:

1. In the portfolio, click **Produce Reports** and then click **License Compliance** in the expanded task group.

The report parameters that you select depend on the settings of the administration server. For example, the default report **End date** is the last time the data was aggregated by the server; if you set a date later than that date the report will be empty.

2. Define the report parameters according to the following information:

License reference
Type the reference number of the license that was automatically generated when the license was created.

License name
Type the name of the license that was assigned when the license was created. Wildcards are supported.

Delivery period start date
Type the software delivery start date for the period you want the report to cover.

Delivery period end date
Type the software delivery end date for the period you want the report to cover. The default date is the last usable date: if you type a date later than the default, the date is not accepted.

License type

    Either select the license type that was allocated when the license was created or select all license types.

Include

    Select whether to report according to licenses, or to license distributions.

End date

    Type the end date of the report. The report will only include licenses that are still valid at the end date.

HWM time range

    Select the number of days up to the end date that the report should span. The high-water mark time range is used only to calculate the high-water mark of usage and it does not influence the value of installations that is calculated at the end date.

Order licenses

    Select whether to view the licenses in ascending or descending order according to the amount of license quota used.

3. Click **Browse report** to view the report immediately or click **Export data** to generate the report using batch processing.
4. The following panel shows a sample output of the report:
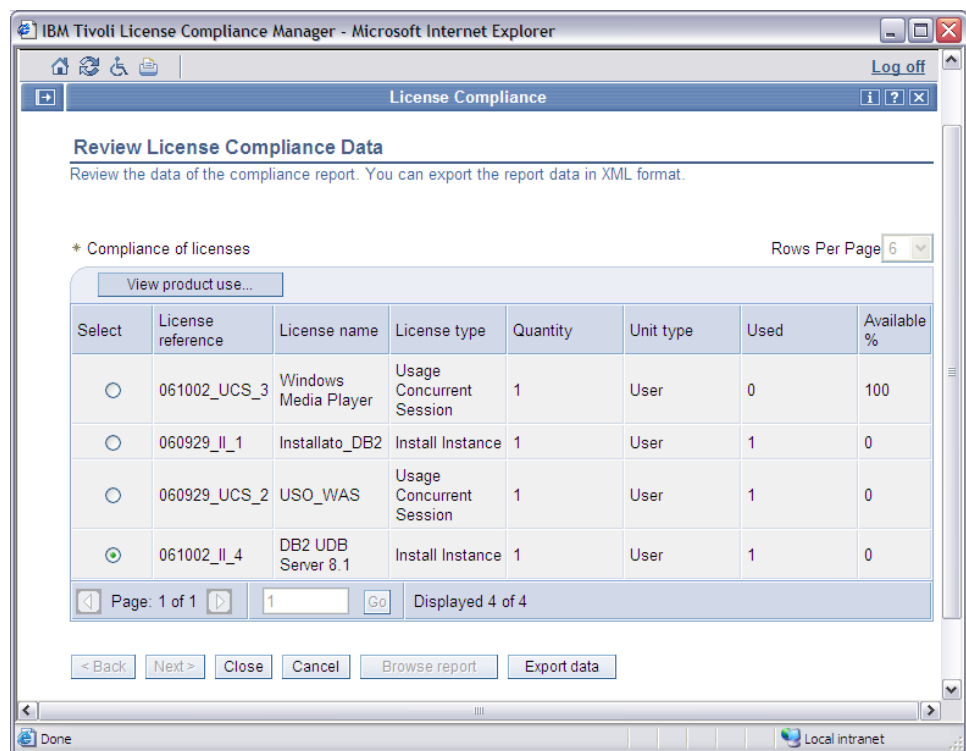
5. The **Compliance of licenses** table consists of the following information:

Select

    Select a license in the table to view the product use for that license.

License reference

    The reference number that was allocated to the license when it was created.

License name

    The name of the license that was assigned when the license was created.

License type

The type of license that was allocated when the license was created. For a list and description of the license types see Table 1 on page 9.

Quantity

The entitled quantity that was allocated to the license when it was created.

Unit type

The unit type that was allocated to the license when it was created. The possible values are:

Processors

License consumption is based on the number of processors used by the application, estimated according to the processor counting policy of the system where the application is installed.

User License consumption is based on the number of instances of the application that are running or are installed.

Processor Value Units

License consumption is based on the type of processor on which the application runs.

Used

The amount of license quota that has been used. For use licenses, this is calculated as a high-water mark of the total quantity granted to use sessions of assigned products over the selected period. For installation licenses, this is a total quantity granted to installed instances of assigned products at the end of the selected period.

Available %

The percentage of available licenses within the reporting period. If the value is zero, it means that all licenses have been used. If the value is below zero, it means that more licenses have been used than those available.

You can choose to export the report data to a file by clicking **Export data**.

6. Select a license in the **Compliance of licenses** table, and click **View Product Use** to view details of the product use for that license.
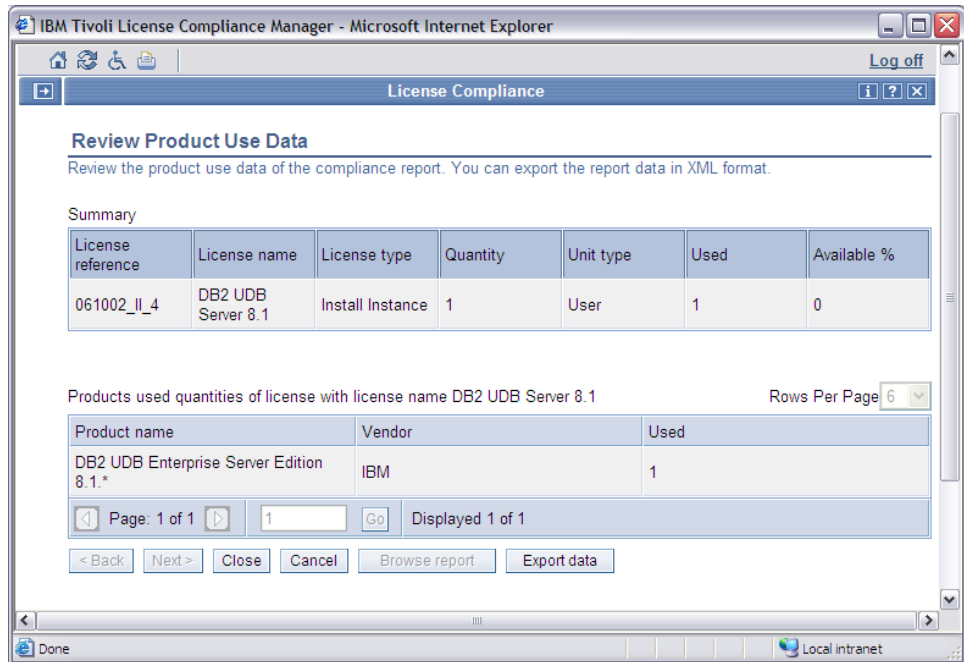
The Summary table consists of the following information:

License reference
The license reference that was automatically generated when the license was created.

License name
The name that was allocated to the license when it was created.

License type
The type of the license that was allocated when the license was created. For a list and description of the license types see Table 1 on page 9.

Quantity
The total number of license instances that were allocated to the license when it was created.

Unit type
The unit type that was allocated to the license when it was created. The possible values are:

> **Processors**
> License consumption is based on the number of processors used by the application, estimated according to the processor counting policy of the system where the application is installed.

> **User** License consumption is based on the number of instances of the application that are running or are installed.

> **Processor Value Units**
> License consumption is based on the type of processor on which the application runs.

Used
The amount of license quota that has been used. For use licenses, this is calculated as a high-water mark of the total quantity granted to use sessions of assigned products over the selected period. For installation

licenses, this is a total quantity granted to installed instances of assigned products at the end of the selected period.

Available %
The percentage of available licenses within the reporting period. If the value is zero it means that all licenses have been used. If the value is below zero, it means that more licenses have been used than those available.

The **Products used** table consists of the following information:

Product name
The name of the product to which the license refers.

Vendor
The vendor of the product to which the license refers.

Used
The number of licenses that have been used.

You can choose to export the report data to a file by clicking **Export data**.

7. Click **Close** to return to the **Review License Compliance Data** panel.

Related tasks

"Exporting reports" on page 131
The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Producing an unlicensed use report

The unlicensed use report provides a view of the products that were being used, or were found installed with product discovery enabled, at a specified time when no valid license was available.

To recover from an out-of-compliance situation, make sure that the following conditions are met:

- A valid license is associated to the product: to be valid, a license must be used within its start and expiration dates, as defined during license creation.
- The distribution of licenses includes the appropriate targets.

In addition, remember to disable product discovery if you do not need a license for a specific product.

To review details of software products used without a license, perform the following steps:

1. In the portfolio, click **Produce Reports** and then click **Unlicensed Use** in the expanded task group.
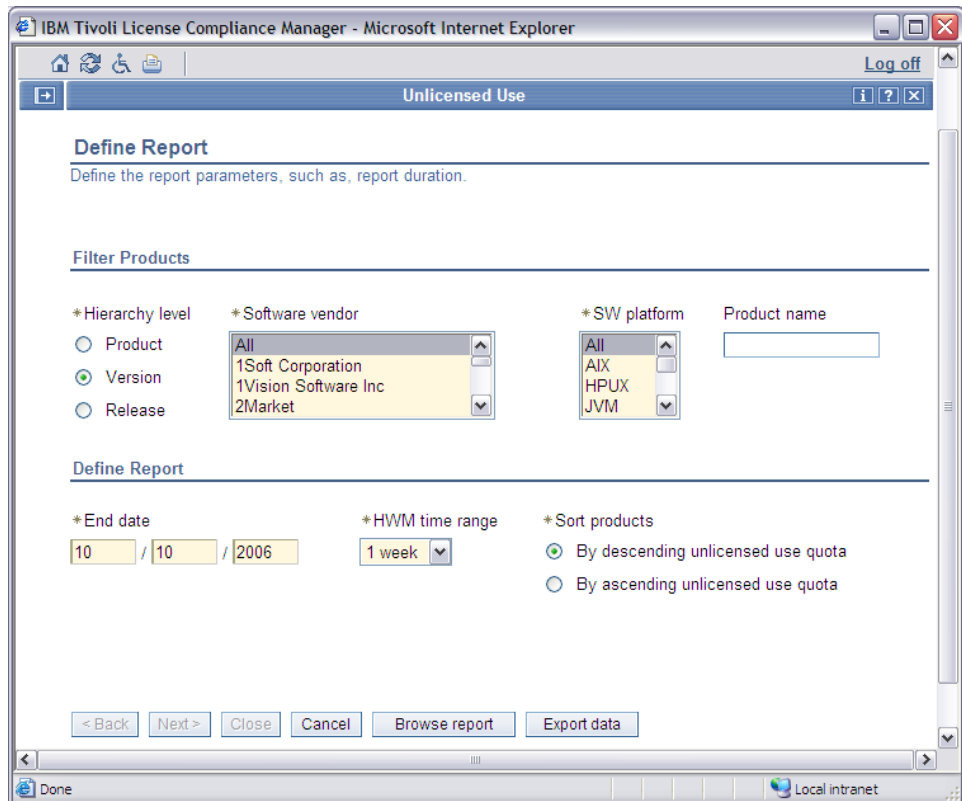
The report parameters that you select depend on the settings of the administration server. For example, the default report **End date** is the last time the data was aggregated by the server.

2. Define the report parameters according to the following information:

Hierarchy level
> Select the level of product hierarchy you want the report to cover.

Software vendor
> Select **All** to include products from all vendors or select one or more vendors.

SW platform
> Select **All** to view unlicensed use for products supporting all operating systems or select one or more operating systems. Select UNIX if you want to search for products that are marked as UNIX products in the catalog; if you select a specific UNIX operating system (for example, AIX), the filter searches for products that are marked with that operating system in the catalog.

Product name
> To limit the products in the report using product name matching, type a part of a product name preceded, followed, or enclosed by wildcard characters (%). All products that have names that match are included in the report.

End date
> Type the date you want the report to end. The default date is the last usable date: if you type a date later than the default, the date is not accepted.
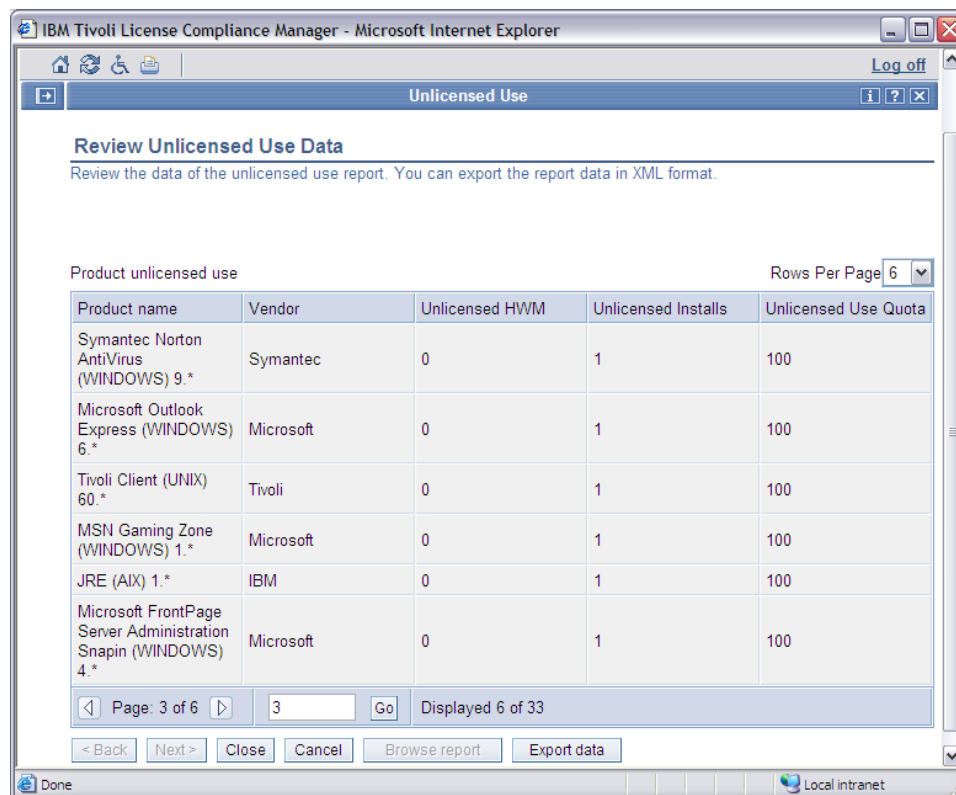
HWM time range
> Select the number of days up to the end date that the report should span.

Sort products
> Select whether the products in the report should be listed in ascending or descending order according to their unlicensed use.

3. Click **Browse report** to view the report immediately, or click **Export data** to generate the report using batch processing.

4. The following panel shows a sample output of the report:

The report table consists of the following information:

Product name
> The name of the product that was subject to unlicensed use during the reporting period.

Vendor
> The vendor of the product.

Unlicensed HWM
> The high-water mark of the product unlicensed use during the reporting period.

Unlicensed installs
> The number of product installations that do not have an associated license.

Unlicensed use quota
> An indicator of the severity of unlicensed use. A value of 100 represents the highest severity.

You can choose to export the report data to a file by clicking **Export data**.

5. Click **Close**.

Related tasks

"Exporting reports"
The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

Exporting reports

The option to export report data to a file is available on the administration server and it applies to all types of report except the IBM Use report, for which a different export function is available.

If you want to export a report, use the **Export data** button underneath the main report table or chart. When you click **Export data**, the report is generated using batch processing.

Use the **Manage Batch Reports** task to:
- View the status of batch report requests that you have submitted
- Delete a batch report request
- Download a report

Viewing the status of batch report requests

Follow this procedure to view the status of requests for reports generated using batch processing.

Perform the following steps:
1. In the portfolio, click **Manage Batch Reports**. Use this panel to limit the requests that can be selected for inclusion in the Statuses of requests for batch reports table.

2. Use the following filters to limit the entries in the Statuses of requests for batch reports table:

Request ID
   Type the number which identifies the request.

Report type
   Select the type of report for which the request was submitted. The possible values are:
   - All
   - Installs by agent (summary)
   - Installs by agent (full details)
   - Install by product (summary)
   - Installs by product (full details)
   - License compliance
   - License use trend
   - Product use trend
   - Unlicensed use
   - Product use level

Request status
   Select the status of requests on which you want to base your search. Possible values are:
   - All
   - Queued
   - Running
   - Completed
   - Too complex
   - Failed

Request owner
   Type the name of the user who submitted the request. This is the name used to log on to Tivoli License Compliance Manager.

Include requests from
   Type the month, day, and year of the date from which you want to search. The format of the date is dependent on your locale settings.

3. Click **Search** to populate the table with the requests that you have filtered.

Deleting batch report requests

Follow this procedure to delete requests for batch reports.

Perform the following steps:

1. In the portfolio, click **Manage Batch Reports**.
2. Search for the request that you want to delete or leave the fields blank to select all requests. Click **Search**.
3. In the **Statuses of requests for batch reports** table select the request that you want to delete and click **Delete**. You can only delete requests whose status is **Completed**, **Queued**, **Too complex**, or **Failed**.
4. Click **OK** on the confirmation message.

Downloading reports

Follow this procedure to download reports generated using batch processing.

Perform the following steps:

1. In the portfolio, click **Manage Batch Reports**.
2. Search for the request whose report you want to download or leave the fields blank to select all requests. Click **Search**.
3. In the **Statuses of requests for batch reports** table select the request whose report you want to download and click **Download**. You can only download reports from requests whose status is **Completed**.

4. Click both file links to download the report and the style sheets to view it. Extract the content of the files to the same directory without changing the directory structure of the files. Open the XML file of the report using a Web browser. You can also print the report when you view it.

Chapter 11. Exporting IBM Use

You might be required by the terms under which you license certain IBM software, to generate a report of use of that software and upload it to an IBM Web site.

This topic provides instructions for exporting information about software use that you send to IBM. See Chapter 12, "IBM end-to-end processing," on page 143, for information about how to upload the data to IBM.

The regular IBM Use reports produced by Tivoli License Compliance Manager can only include licenses for either the per-processor or the processor value unit category, not for both. Therefore, customers who are required to submit the report must not have IBM products assigned to licenses in both categories.

A **convertlic** command is available on the administration server to convert per-processor licenses to processor value unit licenses so that you can obtain processor value unit licenses and report the use of all products correctly. See *IBM Tivoli License Compliance Manager: Commands* for details.

If you are using Tivoli License Compliance Manager for IBM Software, you will be prevented from creating the processor value unit license until you have either cancelled or converted all your per-processor licenses. If you are using the full commercial version of the Tivoli License Compliance Manager product, you can continue to use the per-processor license types for non-IBM products. Therefore, you will not be prevented from creating the new license because of the existence of per-processor licenses in your environment. However, to ensure accurate reporting, you must make certain that all per-processor licenses for IBM products are converted to processor value unit licenses before you produce the next IBM Use report.

Related reference

Chapter 12, "IBM end-to-end processing," on page 143
These topics help organizations that are using Tivoli License Compliance Manager to monitor the use of IBM products with processor based pricing models, and report on that use to IBM.

Creating the content

Follow this procedure to create and export an IBM Use report about the use of IBM software.

You can also generate a test report, valid only for test purposes: IBM will not accept this type of report.

You can add comments to the IBM Use report, either when you create it or at a later date. The reports that you create are saved until you choose to delete them. Comments added to a report can be updated at any time, until the report is deleted.

Comments added to the report are meant for customer internal use only. IBM does not use the comments added to the report to assess compliance. However, you may want to use this feature when you need to point out specific situations (for

example, deductions that you intend to apply to the report) to others in your company prior to submitting the report to IBM.

When you export a report, you must ensure that it is stored in a secure location where only users with the required authority can access it.

To export an IBM Use report, perform the following steps:

Note: To be able to generate a report that covers a complete reporting period, an agent must have been deployed and be working for that period.

1. Click **Export IBM Use** in the portfolio.
2. If no reports are available, click **Create report** after having set the report time range parameters as follows:

   Reporting period
   Select the duration that the report should cover. Possible values are:
   - One month
   - Two months
   - Three months

   Ending in
   Select which month and year you want the reporting period to end. For a report that can be submitted to IBM, this must be a date in the past.
3. Select the report that you want to export.
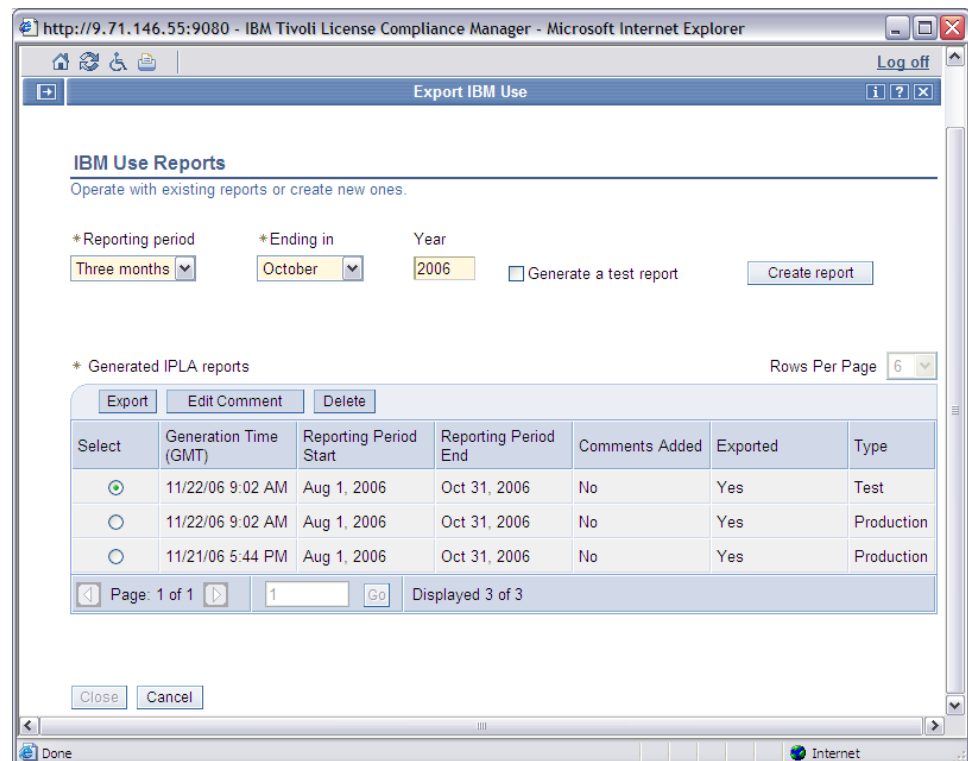
4. If you want to add comments to the report, click **Edit comment**. Type your comment and click **OK** to save it.
5. Click **Export**.
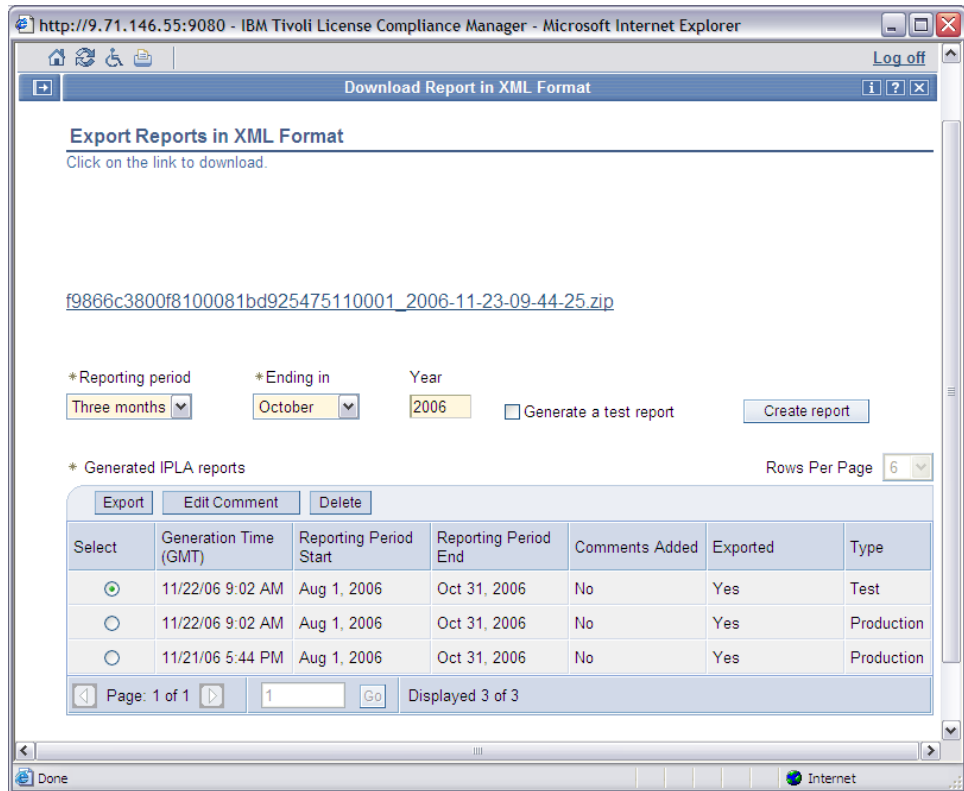
6. Click the file link, and save the zipped file to your disk.

7. To check the contents of the report before uploading it, open the zipped file and extract the data. Open the XML file with a Web browser that supports style sheets (such as, Internet Explorer 6 or Mozilla 1.4). Make sure the data contained in the report is correct. For a description of the various fields see "Reviewing report contents."

8. Upload the report as described in "Generate and upload the IBM Use report" on page 149.

   Related reference

   "Generate and upload the IBM Use report" on page 149
   After you have created your infrastructure, created and assigned your licenses, and you have reached the time when it is necessary to submit a report to IBM, you need to generate an IBM Use report for uploading to the **IBM license management support** Web site.

   Related information

   "Reviewing report contents"
   The IBM Use report is divided into three sections. In addition to these, a fourth section (titled Customer comment) might be present if comments were added to the report.

Reviewing report contents

The IBM Use report is divided into three sections. In addition to these, a fourth section (titled Customer comment) might be present if comments were added to the report.

You can print the IBM Use report by clicking on the print icon that appears at the top of the file.

If the data in the IBM Use report seems inaccurate, you can create a report of unlicensed use and view it to verify the content of the IBM Use report.

Administration server data section

The administration server data section provides general information on the report.
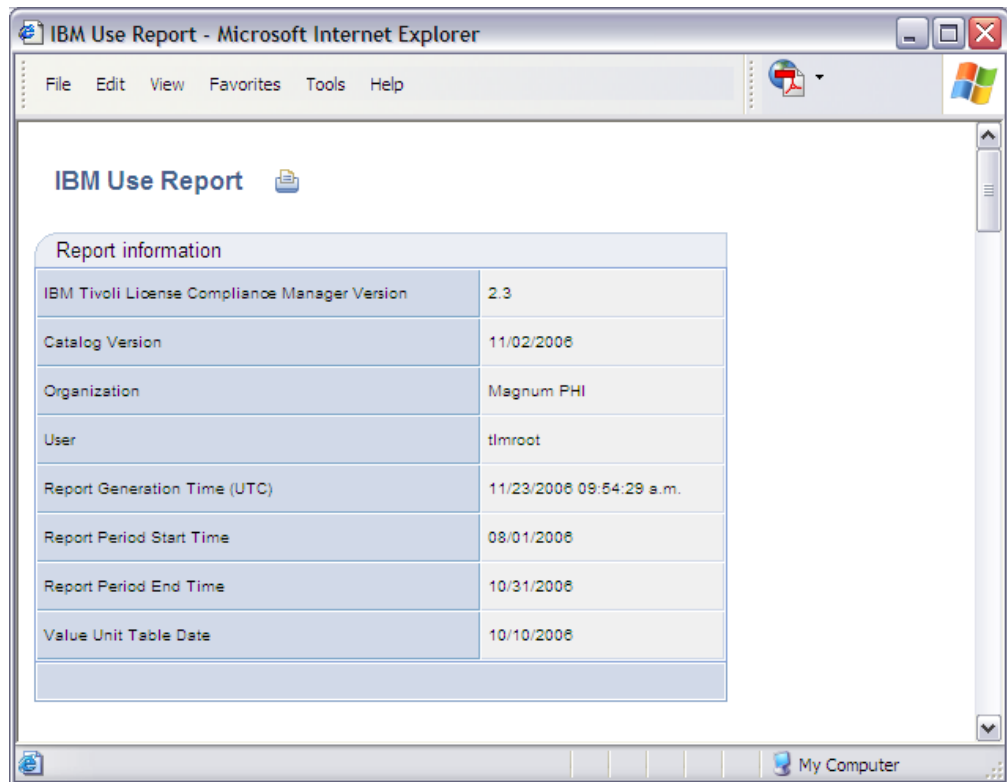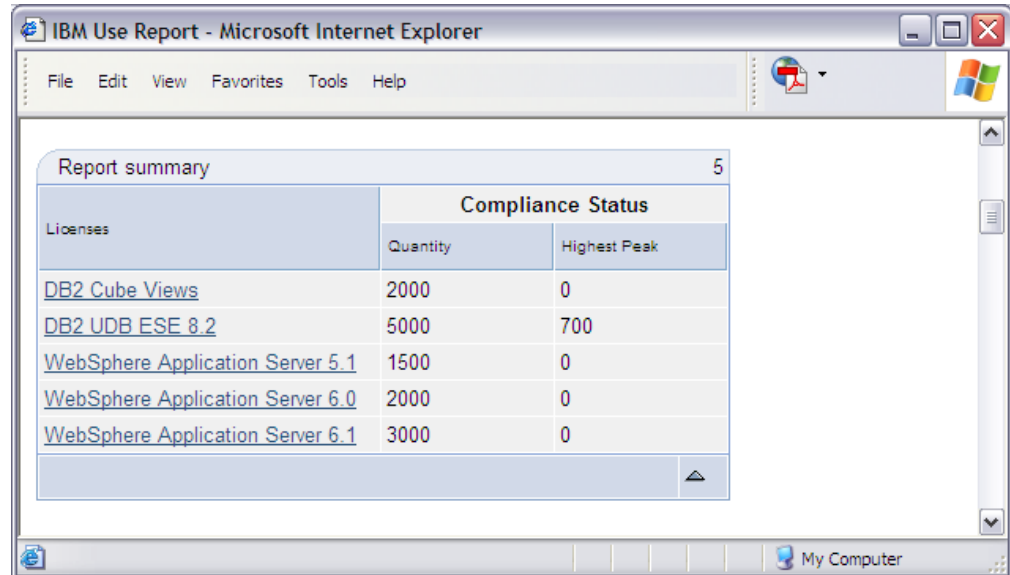
The fields of the administration server data section are the following:

Table 8. IBM Use: Administration Server Data section

Element	Description
IBM Tivoli License Compliance Manager Version	The version of Tivoli License Compliance Manager from which the report was generated.
Catalog Version	The date of the last IBM catalog that was imported to the Tivoli License Compliance Manager database.
Organization	The name of the organization for which the report was generated.
User	The user name of the user who generated the report.
Report Generation Time (UTC)	The date and time when the report was generated in Universal Time Coordinates.
Report Period Start Time	The start date the report refers to.
Report Period End Time	The time when the reporting period ended.
Value Unit Table Date	The date of the Processor Values Unit Table that was last imported.

Report summary section

The report summary section provides a brief summary of the report contents.

Table 9. IBM Use: Report Summary section

Element	Description
Licenses	The list of the license IDs and names that were covered by the generated report.
Compliance Status	The compliance status for each license in the report: license quantity and highest peak are shown. The highest peak is yellow if the used quantity matches the available quantity, or red if the used quantity exceeds the available quantity.

Software use data section

The software use data section provides information about the IBM software products licensed with Full Capacity or Sub-Capacity licenses used during the reporting period.

The software use data section described in this topic contains fields and data that apply to licenses following processor value unit licensing. If no licenses of this type exist, and you are only using per-processor licenses, the content of the software use data section is equivalent to the content that was obtained with the previous version of IBM Tivoli License Compliance Manager.
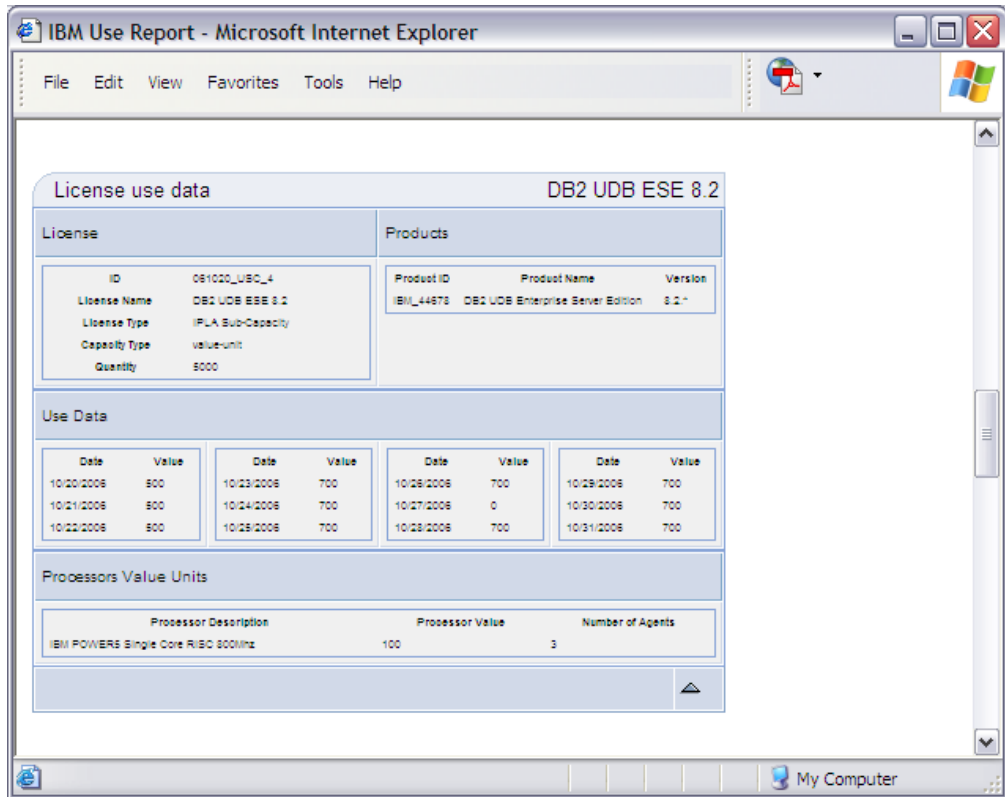
The software use data section is divided into the following parts:

- License
- Products
- Use Data
- Processors Value Units

The number of instances of the four parts is equal to the number of licenses covered by the reporting period.

The **License** part of the section has the following fields:

Table 10. IBM Use: Software Use Data - License

Element	Description
ID	The identifier of the license that was allocated when the license was created by the License and Software Asset Manager.
EE ID	The identifier of the electronic entitlement from which the license has been created. Note that this element is present only if the license was created from an electronic entitlement file.
License Name	The name of the license that was allocated when the license was created by the License and Software Asset Manager.

Table 10. IBM Use: Software Use Data - License (continued)

Element	Description
License Type	The type of license. Possible values are: • IPLA Full Capacity • IPLA Sub-Capacity • Install IPLA Full Capacity • Install IPLA Sub-Capacity The report only deals with licenses that follow value unit licensing.
Capacity Type	The type of capacity. Possible values are: • value-unit
Quantity	The number of license instances that were allocated to the license when it was created. If this number was modified during the reporting period, the report shows the latest modification. Note that if the license was created from an electronic entitlement, the quantity value that you specified might not reflect your authorized level of program use. IBM compares program use as reported on your report with your order history, and not with the quantity that you specified using Tivoli License Compliance Manager.

The **Products** part of the section has the following fields:

Table 11. IBM Use: Software Use Data - Products

Element	Description
Product ID	The identifier of the product.
Product Name	The name of the product.
Version	The version of the product.

The **Use Data** part of the section has the following fields:

Table 12. IBM Use: Software Use Data - Use Data

Element	Description
Date	The sequential dates during the reporting period when use data was recorded.
Value	The high-water mark value that was recorded on the date indicated in the **Date** element.

The **Processors Value Units** part of the section has the following fields:

Table 13. IBM Use: Software Use Data - Processors Value Units section

Element	Description
Processor Description	A complete description of the type of processor.

Table 13. IBM Use: Software Use Data - Processors Value Units section (continued)

Element	Description
Processor Value	The value units associated to this type of processor.
Number of Agents	The maximum number of agents that, during a single day, used this license on this type of processor.

Chapter 12. IBM end-to-end processing

These topics help organizations that are using Tivoli License Compliance Manager to monitor the use of IBM products with processor based pricing models, and report on that use to IBM.

For additional information on this, refer to the following Internet address: http://www.ibm.com/lotus/sub-capacity.

Program License Information is available at http://www-306.ibm.com/software/sla/sladb.nsf.

If the terms with which you received IBM software products require you to monitor their use, you need to perform the tasks detailed in these topics in the order that they are described.

Note: If you received a z/OS® product that includes a product for distributed systems, or if you received a product from a software publisher other than IBM, and if, in your environment, you are using products whose licenses require you to collect information about their use and report this information to IBM, then you must ensure that use of this instance of the product is not included in the report. To do this, create a license selecting a license type that does not involve reporting to IBM, and associate this instance of the product with it.

Plan installation of Tivoli License Compliance Manager and agent deployment

You must plan the infrastructure that you intend to create for your organizations that will use Tivoli License Compliance Manager.

You need to plan the various phases of the installation, infrastructure creation, and agent deployment. This planning is necessary because, for example, the agents that you deploy will be linked to a specific division that must already be in place. All of the information that you need to accurately plan your infrastructure is provided in *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

Install IBM Tivoli License Compliance Manager

For complete instructions about how to install IBM Tivoli License Compliance Manager, refer to *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

Register the runtime servers

After you have installed Tivoli License Compliance Manager, you need to register your runtime servers with their respective administration server.

You do this from the Web UI on the administration server. For information about registering your servers, see "Registering a runtime server" on page 40.

Update the product catalog

You must periodically download the product catalog and import it into Tivoli License Compliance Manager to ensure that the version you have is up-to-date.

In addition, downloading and importing the catalog is mandatory for a new installation of Tivoli License Compliance Manager.

To update your catalog, perform the following steps:

1. Access the latest catalog at the following Web address:

http://www-306.ibm.com/software/sysmgmt/products/support/IBMTivoliLicenseManager.html

2. Select the most recent IBM Software Catalog update from the **Download** section of the **Self help** part of the page.
3. Download the relevant catalog files.
4. Open a Tivoli License Compliance Manager administration server command-line session.
5. Enter the following command:

   impcat *filename*

   where filename is the XML catalog file you are uploading. When the file is in the administration command-line directory, you only need to specify the file name. When the file is located in a directory other than the administration command line, you need to specify the full path name.

Create the organization infrastructure

There are several stages involved in creating the infrastructure for your organization:

- Adding organizations to your administration server databases.
- Adding administrator accounts.
- Defining user profiles.
- Adding divisions.

  Related tasks

  "Creating organizations" on page 31
  Follow this procedure to add an organization to the administration server database.

  "Adding administrator accounts" on page 34
  Use **Accounts** in the **Manage Access** task group to create accounts for administrators who are allowed to use the Web UI on the administration server. This activity cannot be performed if you use LDAP for both authentication and authorization.

  "Defining user profiles" on page 37
  Follow this procedure to create or change profiles for an administrator account. This activity cannot be performed if you use LDAP for both authentication and authorization.

  "Adding divisions" on page 45
  This topic describes how you create a division.

Deploy the agents

You need to deploy agents for all the nodes that you intend to monitor for IBM use.

For information about how to deploy agents to your nodes, see *IBM Tivoli License Compliance Manager: Planning, Installation, and Configuration*.

Register the administration servers

The administration server that generates the use figures must be registered in the License management support Web site.

Any of the authorized Passport Advantage® Online users for your organization can perform license management tasks. These users can register the administration server, obtain electronic entitlements that can be used for creating new Tivoli License Compliance Manager licenses, and upload the IBM report of Sub-Capacity license use.

The Passport Advantage primary contact for your organization can delegate other users to use the features of the License management support site.

If you are not an authorized Passport Advantage Online user, and do not know who is the Passport Advantage primary contact for your organization, you can find this information following this procedure:

1. Open a Web browser and go to the Passport Advantage site at: http://www-306.ibm.com/software/howtobuy/passportadvantage/.
2. Select the **Passport Advantage Online** tab.
3. Select **Customer sign in**.
4. Type your IBM ID and password.
5. The Self-nomination page displays.
6. Type the Passport site number for your company (a seven digit number that starts with 7). If you do not know the site number, contact your IBM Sales Representative or Business Partner.
7. Select **No** for "I believe I am the Primary Contact for this Site".
8. Click **Submit** to forward the self-nomination request to the primary contact for appropriate action.

To register an IBM Tivoli License Compliance Manager administration server, perform the following steps:

1. Open a Web browser and select the following address: https://www-5.ibm.com/software/lms.

   The License management support home page is displayed. The steps that follow and the content of the License management support Web site are those valid at the time this information was published, and can change over time.
2. Click **Sign in** to enter the application.
3. Type your **IBM ID** and **Password** and click **Submit**.
4. Click **License Compliance Manager setup**.
5. Click **ITLM registration**.

   Complete the form as follows:
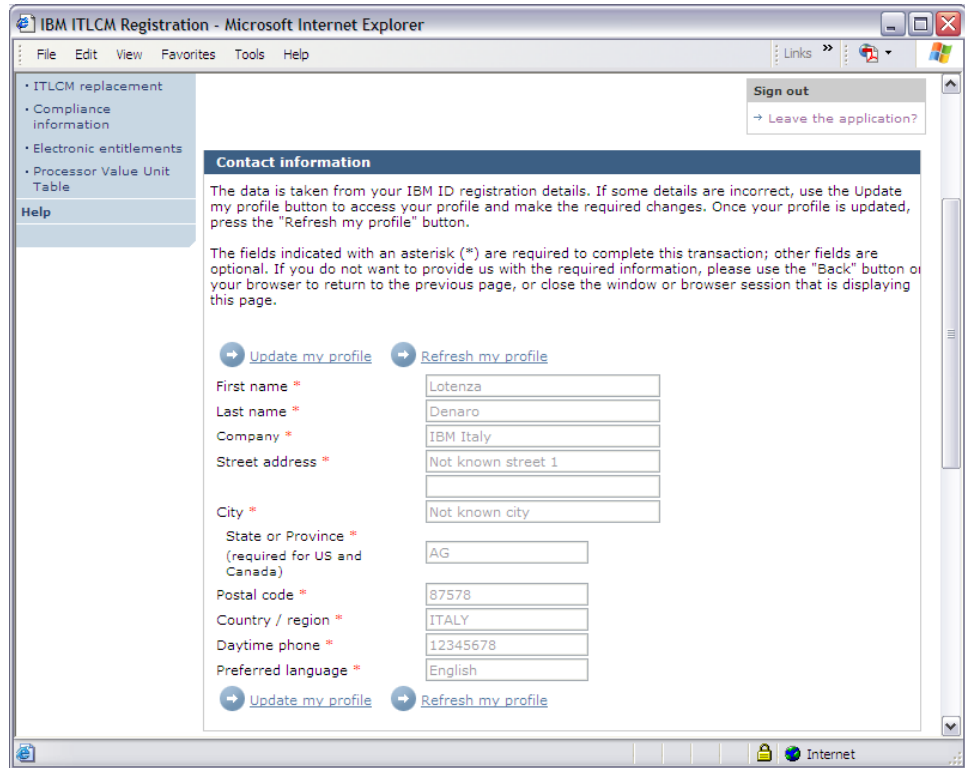
Update my profile

Click **Update my profile** to modify incorrect or inaccurate information. If you are not the focal point responsible for the administration server that you are registering, the appropriate person must sign in to register the administration server.

Refresh my profile

When you modified contact details in your IBM profile, click **Refresh my profile** to see the modifications.
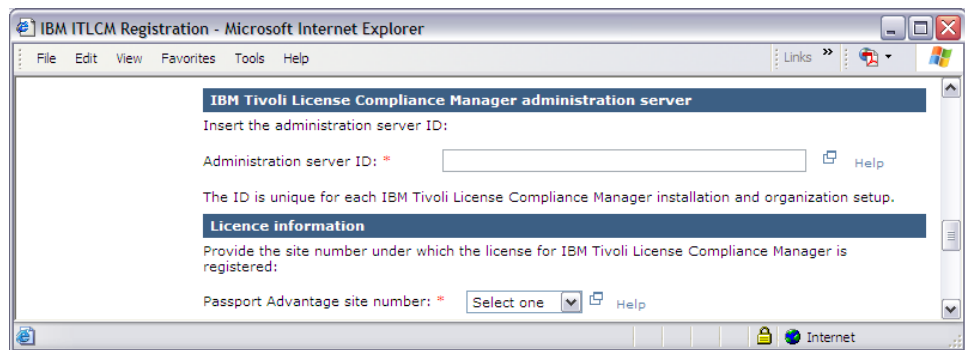
Administration Server ID

This is the unique server ID that was generated when the administration server was created during server installation and each time a new organization is created. You can obtain this ID by looking at the **Server Registration ID** field on the Organization Data panel on your administration server Web UI.
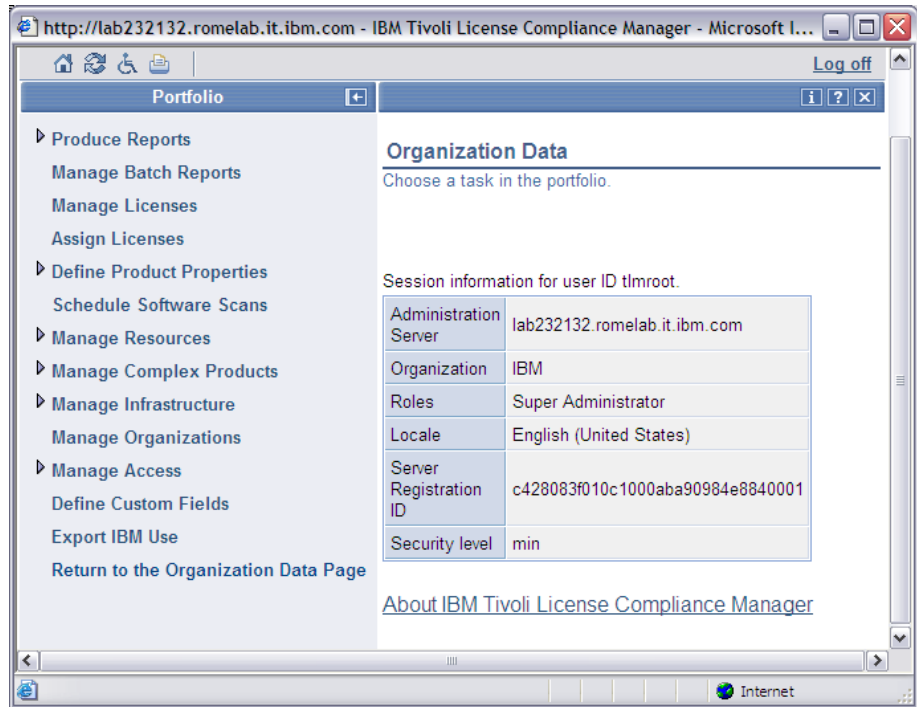
Passport Advantage Site Number

The site number where the IBM Tivoli License Compliance Manager license is registered.
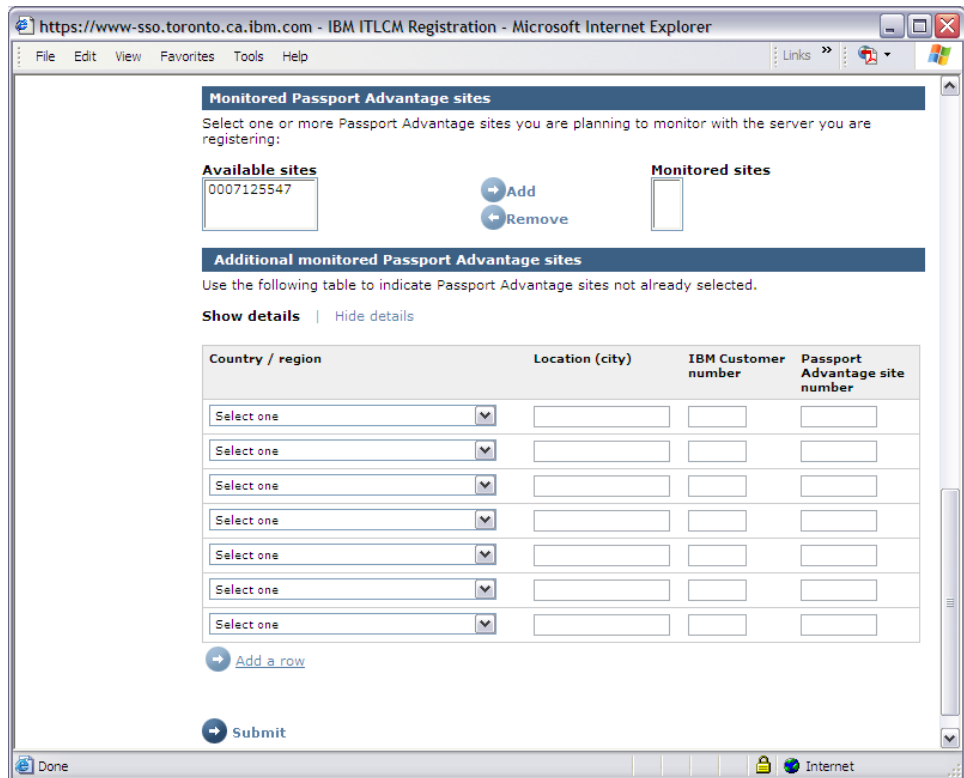
Use this section to register the sites where the runtime servers being monitored are located, and their **Passport Advantage** site numbers. Select one or more available sites, or enter any additional information if you do not find the relevant sites in the provided list.

Country / region
Select the country or region of the runtime server.

Location (city)
Type the name of the city where the server is located.

IBM Customer number
Type the IBM customer number of the runtime server site.

Passport Advantage site number
Type the Passport Advantage site number of the site where the runtime server is located.

Add a row
Click **Add a row** to add a new row to the table.

6. Click **Submit**.

You must repeat the process for all the administration servers that you are registering.

Create licenses and distribution quotas

After your infrastructure is in place, and you have registered your administration servers, you need to create the licenses for your Full Capacity and Sub-Capacity pricing model products.

You need to do the following:

- Create the licenses for the products you are using. The preferred approach is to use an electronic entitlement file because this minimizes the amount of manual work. However, you can also create the license manually and assign it to products at hierarchy level of version or release.
- Assign the license distribution quotas to the various divisions and agents.

You can obtain an electronic entitlement from the License management support Web site (at: http://www-5.ibm.com/software/lms). To download an electronic entitlement, you must either be a Passport Advantage designated contact for the site under which the product was licensed or have been delegated access on this Web site by the designated contact. For more information, see the Help function on the License management support Web site.

When you have obtained an electronic entitlement, you can import the information using one of the following methods:

- Using the dialogs of the Web UI: see "Managing licenses" on page 63
- Using the **eeimport** command: see *IBM Tivoli License Compliance Manager: Commands*

If the license follows value unit licensing, you must ensure that Tivoli License Compliance Manager uses the latest version of the Processor Value Unit table. You can obtain the latest version of the table from the License management support Web site (at: http://www-5.ibm.com/software/lms). When you have downloaded the table, you can import it using the **vutableimp** command.

Related concepts

"Electronic entitlements" on page 6
You can define licenses by providing information in electronic format.

Related tasks

"Managing licenses" on page 63
Follow this procedure to create, modify, and delete software licenses.

"Assigning a license" on page 73
Follow this procedure to assign products to a license and, optionally, limit the access to a license to specific divisions, agents, nodes, and users.

"Modifying an existing license" on page 70
Follow this procedure to work with an existing license.

Generate and upload the IBM Use report

After you have created your infrastructure, created and assigned your licenses, and you have reached the time when it is necessary to submit a report to IBM, you need to generate an IBM Use report for uploading to the **IBM license management support** Web site.

For information about how to generate the report, see Chapter 11, "Exporting IBM Use," on page 135. Only perform this task if you have the required authority within your organization to generate and view software use data.

Note: Remember that your administration server must be registered before you upload your IBM Use report. See "Register the administration servers" on page 145 for more information.

To upload the IBM Use report, perform the following steps:
1. Open a Web browser and select the following address: https://www-5.ibm.com/software/lms.

   The License management support home page is displayed. The steps that follow and the content of the License management support Web site are those valid at the time this information was published, and can change over time.
2. Click **Sign in** to enter the application.
3. Type your **IBM ID** and **Password** and click **Submit**.
4. Click **Data Submission**.
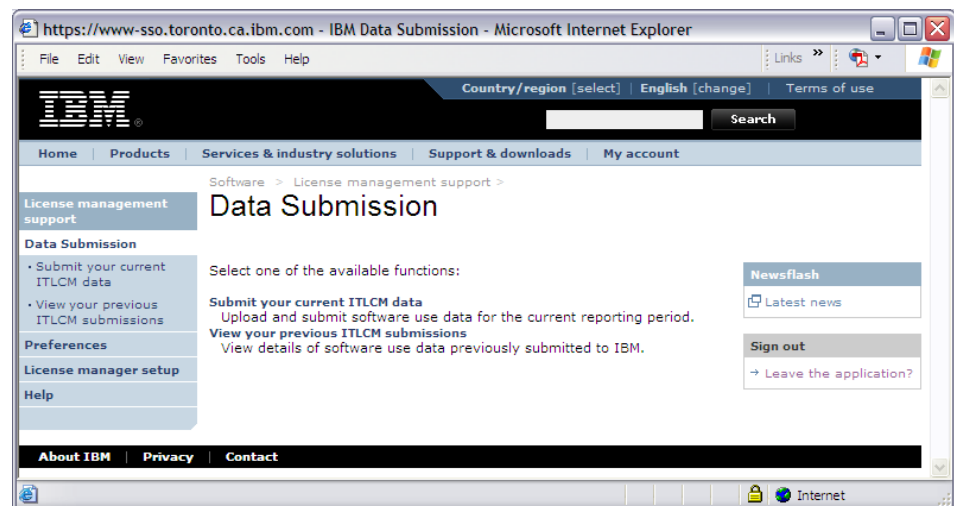
5. Click **Submit your current ITLCM data**.
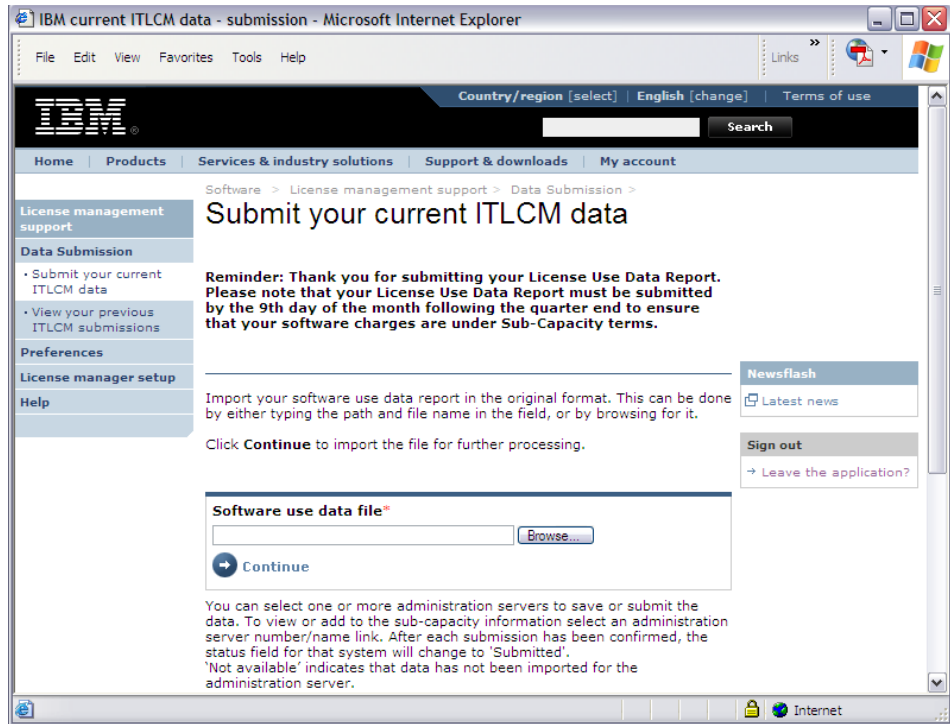
6. Browse for the ZIP file or for the XML file that contains the IBM Use report and click **Continue**. The file is imported.
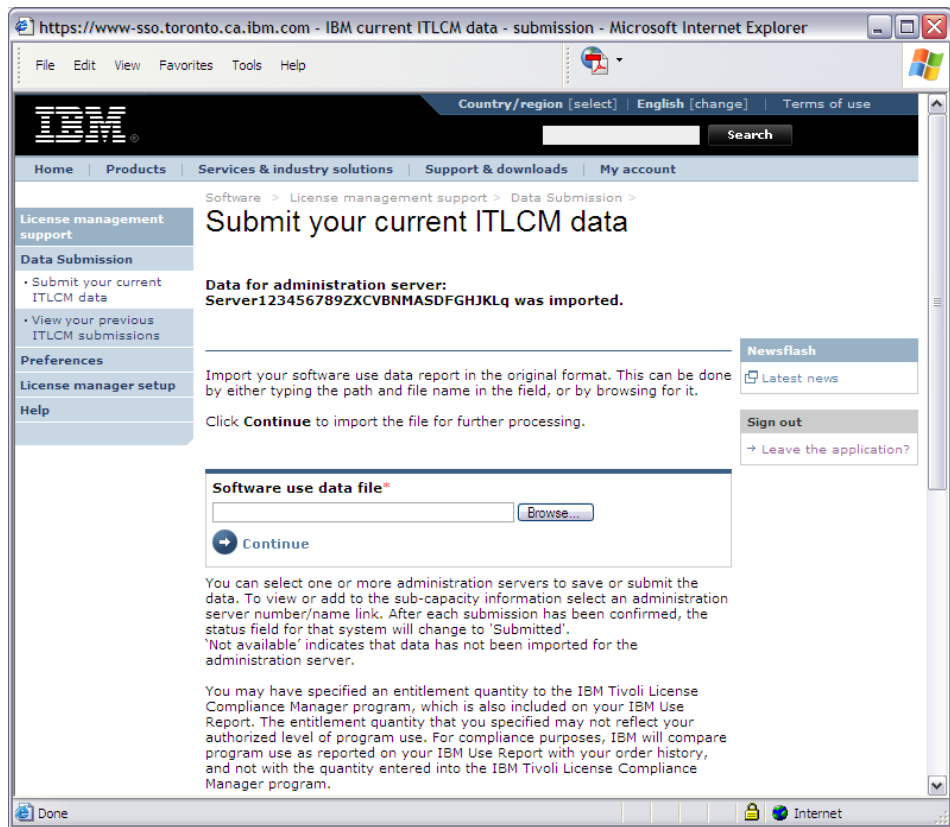
7. To view details, click on an Administration server name link.
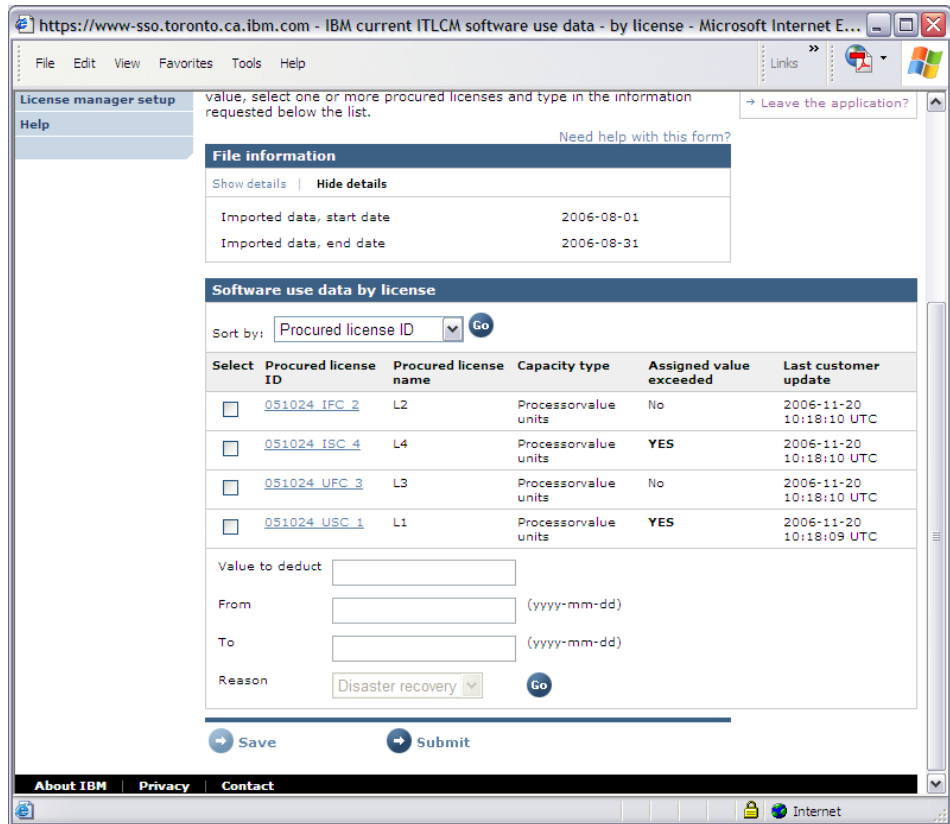
8. To view or work with a license, click a Procured license ID name link.
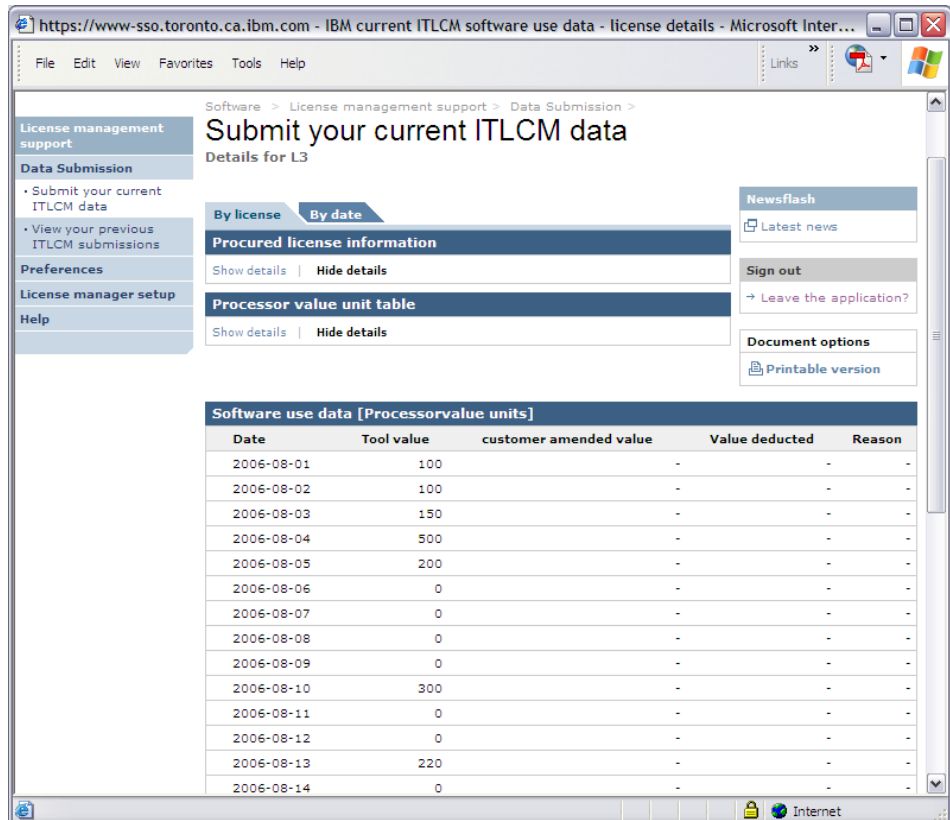
9. If you have a reason to apply a deduction, type the value to deduct, type the dates to which the deduction applies, select a reason, and click **Go**.
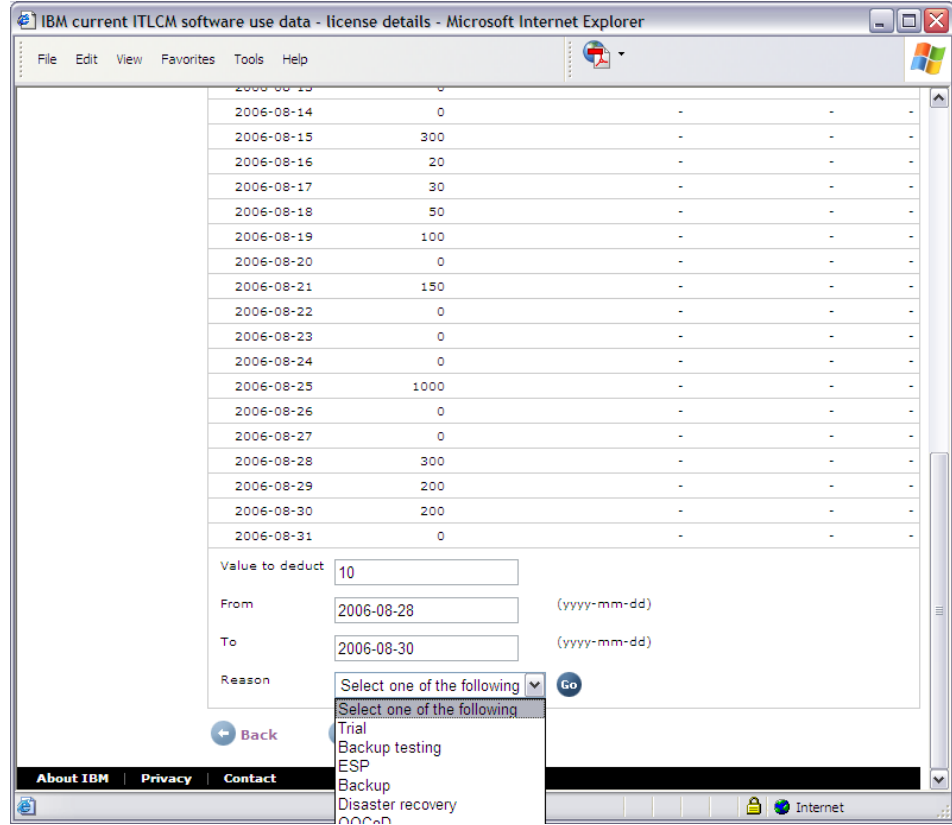
10. The same panel is displayed showing the deductions you just made.

https://www.sso.toronto.ca.ibm.com - IBM current ITLCM software use data - license details - Microsoft Inter...

File   Edit   View   Favorites   Tools   Help

	2006-08-17	30	-	-	-
	2006-08-18	50	-	-	-
	2006-08-19	100	-	-	-
	2006-08-20	0	-	-	-
	2006-08-21	150	-	-	-
	2006-08-22	0	-	-	-
	2006-08-23	0	-	-	-
	2006-08-24	0	-	-	-
	2006-08-25	1000	-	-	-
	2006-08-26	0	-	-	-
	2006-08-27	0	-	-	-
☐	2006-08-28	300	290	10	Disaster recovery
☐	2006-08-29	200	190	10	Disaster recovery
☐	2006-08-30	200	190	10	Disaster recovery
	2006-08-31	0	-	-	-

⊗ Delete Deductions

Value to deduct   [   ]

From   [   ]   (yyyy-mm-dd)

To   [   ]   (yyyy-mm-dd)

Reason   [Select one of the following ▼] Go

← Back   → Save

About IBM | Privacy | Contact

Done   🔒 ● Internet

11. If you want to cancel the deductions you just made, select the relevant dates and click **Delete Deductions**, otherwise click **Save**. The status of your submission is changed to Work in Progress. When a submission is confirmed, the status changes to Submitted.

For outages or application support of this Web site, contact the Customer Support Center at phone +45 48 10 15 30 or e-mail address kmsweb@dk.ibm.com. The Customer Support Center will attend to any request in English 24 hours a day, 7 days a week. For any other requests, contact your local IBM representative.

Chapter 13. Accessibility

This topic describes the keyboard alternatives to mouse navigation, selection, and activation on the Tivoli License Compliance Manager Web UI.

In addition to these key combination assignments, you can also use any standard features for text resizing and keyboard access that are available for your browser.

Note: If you are reading the Web UI with Home Page Reader, you should not use the browser keys to navigate through the interface or to refresh panels.

Navigating the Web UI

This topic shows the key combinations you use to navigate among the different areas of the Web UI.

Table 14. Key combinations for navigating the Web UI

Key combination	Action
TAB	Move the focus to the next link or control.
SHIFT + TAB	Move the focus to the previous link or control.
CTRL + right arrow	Moves the focus to the section of the window to the right of the current focus.
CTRL + left arrow	Moves the focus to the section of the window to the left of the current focus.
ALT + t	Moves the focus to the first item in the toolbar.
ALT + m	Moves the focus to the first item in the portfolio.
ALT + k	Moves the focus to the first control in the work area, if any.
ALT + f	Returns to the Home Page.
ALT + r	Refreshes the current window.
ALT + a	Opens the accessibility information help panel.
ALT + h	Opens the current dialog help panel.
ALT + n	Opens the Tivoli License Compliance Manager About panel.
ALT + o	Logs you off.
ENTER	Activates the link, tool bar control, or work area button that has focus. If focus is not on a link, control, or button, pressing ENTER starts the default action.

Shortcut keys for starting tasks

This topic shows the key combinations for starting the tasks that are listed in the portfolio. You can use these key combinations to start a task directly without navigating the task groups listed in the portfolio.

Table 15. Key combinations for starting tasks

Key combination	Action
ALT + y	Expands or collapses the Portfolio.
ENTER	Starts the task that is currently in focus.

Table 15. Key combinations for starting tasks (continued)

Key combination	Action
ALT + p	Expands or collapses the Produce Reports task group.
ALT + SHIFT + i	Starts Installs Snapshot task.
ALT + SHIFT + t	Starts License Use Trend task.
ALT + SHIFT + x	Starts Product Use Trend task.
ALT + SHIFT + l	Starts Use Level Analysis task.
ALT + SHIFT + a	Starts the Unlicensed Use task.
ALT + SHIFT + c	Starts License Compliance task.
ALT + SHIFT + q	Starts Manage Batch Reports task.
ALT + g	Expands or collapses the Manage Licenses task group.
ALT + SHIFT + z	Starts Licenses task.
ALT + SHIFT + d	Starts Assign Licenses task.
ALT + e	Expands or collapses the Define Product Properties task.
ALT + SHIFT + 1	Starts Define Monitoring task.
ALT + SHIFT + 2	Starts Define Discovery task.
ALT + SHIFT + 3	Starts Define Multi Instance task.
ALT + SHIFT + h	Starts Schedule Software Scan task.
ALT + s	Expands or collapses the Manage Resources task group.
ALT + SHIFT + v	Starts Divisions task.
ALT + SHIFT + n	Starts Nodes task.
ALT + SHIFT + u	Starts Application Users task.
ALT + b	Expands or collapses the Manage Complex Products task group.
ALT + SHIFT + y	Starts Mapping Complex Products task.
ALT + SHIFT + p	Starts Resolve Unmapped Components task.
ALT + SHIFT + w	Starts View Mappings task.
ALT + w	Expands or collapses the Manage Infrastructure task group.
ALT + SHIFT + r	Starts Servers task.
ALT + SHIFT + g	Starts Agents task.
ALT + SHIFT + o	Starts Manage Organizations task.
ALT + c	Expands or collapses the Manage Access task group.
ALT + SHIFT + k	Starts Accounts task.
ALT + SHIFT + f	Starts Profile task.
ALT + SHIFT + 4	Starts Define Custom Fields task.
ALT + SHIFT + b	Starts Export IBM Use task.
ALT + SHIFT + 5	Returns to the Welcome page.

Appendix A. Support information

If you have a problem with your IBM software, you want to resolve it quickly. This section describes the following options for obtaining support for IBM software products:

- "Using IBM Support Assistant"
- "Obtaining fixes"
- "Receiving weekly support updates" on page 158
- "Contacting IBM Software Support" on page 158

Using IBM Support Assistant

The IBM Support Assistant is a free, stand-alone application that you can install on any workstation. You can then enhance the application by installing product-specific plug-in modules for the IBM products you use.

The IBM Support Assistant saves you time searching product, support, and educational resources.

The product-specific plug-in modules provide you with the following resources:

- Support links
- Education links

For more information, see the IBM Support Assistant Web site at http://www.ibm.com/software/support/isa/.

If your product does not use IBM Support Assistant, use the links to support topics in your information center. In the navigation frame, check the links for resources listed in the **ibm.com and related resources** section where you can search the following resources:

- Support and assistance (includes search capability of IBM technotes and IBM downloads for interim fixes and workarounds)
- Training and certification
- IBM developerWorks
- IBM Redbooks
- General product information

If you cannot find the solution to your problem in the information center, search the following Internet resources for the latest information that might help you resolve your problem:

- Forums and newsgroups
- Google.com

Obtaining fixes

A product fix might be available to resolve your problem. To determine what fixes are available for your IBM software product, follow these steps:

1. Go to the IBM Support & download Web page at http://www.ibm.com/support/us/.

2. Click **Downloads and drivers** in the **Support & downloads** section.
3. Select one software category from the **Category** list.
4. Select one product from the **Sub-category** list.
5. Type more search terms in the **Search within results** if you want to refine your search.
6. Click **Search**.
7. From the list of downloads returned by your search, click the name of a fix to read the description of the fix and to optionally download the fix.

For more information about the types of fixes that are available, see the *IBM Software Support Handbook* at http://techsupport.services.ibm.com/guides/handbook.html

Receiving weekly support updates

To receive weekly e-mail notifications about fixes and other news about IBM products, follow these steps:
1. Go to the IBM Software Support Web site at www.ibm.com/software/support.
2. Click **My support** in the upper right corner of the page.
3. If you have already registered for **My support**, sign in and skip to the next step. If you have not registered, click **register now**. Complete the registration form using your e-mail address as your IBM ID and click **Submit**.
4. Click **Edit profile**.
5. In the **Products** list, select **Software**. A second list is displayed.
6. In the second list, select a product segment, for example, **Application servers**. A third list is displayed.
7. In the third list, select a product sub-segment, for example, **Distributed Application & Web Servers**. A list of applicable products is displayed.
8. Select the products for which you want to receive updates, for example, **IBM HTTP Server** and **WebSphere Application Server**.
9. Click **Add products**.
10. After selecting all products that are of interest to you, click **Subscribe to email** on the **Edit profile** tab.
11. Select **Please send these documents by weekly email**.
12. Update your e-mail address as needed.
13. In the **Documents** list, select **Software**.
14. Select the types of documents that you want to receive information about.
15. Click **Update**.

If you experience problems with the **My support** feature, you can obtain help in one of the following ways:

Online
> Send an e-mail message to erchelp@ca.ibm.com, describing your problem.

By phone
> Call 1-800-IBM-4You (1-800-426-4968).

Contacting IBM Software Support

IBM Software Support provides assistance with product defects.

Before contacting IBM Software Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. The type of software maintenance contract that you need depends on the type of product you have:

- For IBM distributed software products (including, but not limited to, Tivoli, Lotus®, Rational® products, and DB2 and WebSphere products that run on Windows or UNIX operating systems), enroll in Passport Advantage in one of the following ways:
  - **Online**: Go to the Passport Advantage Web site at

    www.lotus.com/services/passport.nsf/WebDocs/Passport_Advantage_Home

    and click **How to Enroll**.
  - **By phone**: For the phone number to call in your country, go to the IBM Software Support Web site at techsupport.services.ibm.com/guides/contacts.html and click the name of your geographic region.
- For customers with Subscription and Support (S & S) contracts, go to the Software Service Request Web site at https://techsupport.services.ibm.com/ssr/login
- For customers with IBMLink, CATIA, Linux, OS/390, iSeries, pSeries, zSeries, and other support agreements, go to the IBM Support Line Web site at http://www.ibm.com/services/us/index.wss/so/its/a1000030/dt006
- For IBM eServer™ software products (including, but not limited to, DB2 and WebSphere products that run in zSeries®, pSeries, and iSeries environments), you can purchase a software maintenance agreement by working directly with an IBM sales representative or an IBM Business Partner. For more information about support for eServer software products, go to the IBM Technical Support Advantage Web page at www.ibm.com/servers/eserver/techsupport.html.

If you are not sure what type of software maintenance contract you need, call 1-800-IBMSERV (1-800-426-7378) in the United States or, from other countries, go to the contacts page of the IBM Software Support Handbook on the Web (techsupport.services.ibm.com/guides/contacts.html) and click the name of your geographic region for phone numbers of people who provide support for your location.

To contact IBM Software Support, follow these steps:
1. "Determine the business impact of your problem"
2. "Describe your problem and gather background information" on page 160
3. "Submitting problems" on page 160

Determine the business impact of your problem

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem you are reporting. Use the following criteria:

Severity 1	**Critical** business impact: You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.
Severity 2	**Significant** business impact: The program is usable but is severely limited.
Severity 3	**Some** business impact: The program is usable with less significant features (not critical to operations) unavailable.

Severity 4	**Minimal** business impact: The problem causes little impact on operations, or a reasonable circumvention to the problem has been implemented.

Describe your problem and gather background information

When explaining a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can you re-create the problem? If so, what steps where performed to re-create the problem?
- Did you make any changes to the system? For example, did you make changes to the hardware, operating system, networking software, and so on?
- Are you currently using a workaround for the problem? If so, be prepared to explain the workaround when you report the problem.

The problem determination toolkit includes commands for assembling problem determination information for all product components. For more information see *IBM Tivoli License Compliance Manager: Problem Determination*.

Submitting problems

You can submit your problem to IBM Software Support in one of two ways:

Online

Click **Report problems** on the IBM Software Support site at http://www.ibm.com/software/support/probsub.html. Type your information into the appropriate problem submission form.

By phone

For the phone number to call in your country, go to the contacts page of the *IBM Software Support Handbook* at techsupport.services.ibm.com/ guides/contacts.html and click the name of your geographic region.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Software Support provides a workaround for you to implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM product support Web pages daily, so that other users who experience the same problem can benefit from the same resolutions.

Appendix B. Use of Apache Batik

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Apache Batik v. 1.5

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Glossary

A

account. *See* administration account.

administration account. The record of a user of the Web UI that is stored in the database. An administration account defines the identification details of the user. Each account must have at least one profile, which defines the role and privacy policy of the user when working with a specific organization.

administration server. A component that performs the following tasks:

- Maintains a database of product, license, organization, application user, and infrastructure information
- Provides a Web UI where administrators can define and update the infrastructure and license rules for their organizations and produce historical reports

administration server database. A DB2 database associated with the administration server. This database stores the information about organizations, monitoring infrastructure, and license entitlement that are defined on the administration server, and also the historic inventory and software usage information that is used in the historical reports available on the administration server Web UI.

administrator. A role that can perform all Web UI tasks with the exception of Manage Organizations and Manage Access.

agent. A component that performs the following functions on the node:

- Performs regular software scans and forwards the results to the runtime server
- Identifies which monitored applications are active and communicates to the runtime server so that a license can be assigned or released by the administration server

application user. A user who can start applications on nodes. Details of application users are maintained to allow licenses to be restricted to specified users.

C

catalog. The central repository of product information and related signatures that contains entries for software components that can be monitored.

complex product. A software product that includes at least one component that is shared with another software product.

component. (1) A part of at least one software product that is identified by its own signature in the catalog. (2) A part of the Tivoli License Compliance Manager infrastructure, such as a server, an agent, or a database.

D

distribution quota. A portion of the total license quantity that is distributed to specified targets or users.

division. An administrative grouping of agents in Tivoli License Compliance Manager. A division is used to group agents so that they can be selected as a group, for example when scheduling software scans or specifying target distribution rules.

E

electronic entitlement. An XML file, provided by IBM with a software product, that describes the terms and conditions under which the product is licensed. The electronic entitlement simplifies the process of creating a license for the product in Tivoli License Compliance Manager.

event. An occurrence that causes creation of an entry in the event log, and possibly a notification to be generated and sent to designated users.

H

high-water mark. The maximum concurrent license usage for a product since the high-water mark was last reset.

I

instrumented product. A software product that relies on APIs, embedded in its code, to communicate license requests and license releases to the agent.

L

license and software asset manager. A role that can use the tasks in the Manage Procurement task group, assign licenses to products, distribute licenses to targets and users, define the monitoring settings of products, and produce reports.

license type. An attribute of a license that identifies the set of rules that are applied when the license use is calculated.

M

metering. A process by which software use is measured and recorded. The data recorded (for example, number of sessions, number of concurrent sessions, duration of sessions, capacity used, node ID, user ID) may be used by licensees to assess license requirements, or by software vendors to verify compliance or to make billing calculations.

N

node. A computer in the network that can be monitored by Tivoli License Compliance Manager when an agent is deployed on it.

notification. An e-mail sent to a designated user in response to a license management or internal event.

O

organization. An organization whose license management is controlled by Tivoli License Compliance Manager. Each organization is the owner of a set of the Tivoli License Compliance Manager components, including runtime servers, divisions, agents, and application users.

P

potential signature. In license management, a set of identifying information for an application that is in use on at least one node. The identifying information was collected by the agent and could be used to create a use monitoring signature.

privacy policy. A setting that is part of the profile of a user of the administration server Web UI. The privacy policy determines whether details related to installed software information should be included in reports produced by the user.

product monitoring. A setting that enables or disables the collection of software use information for a product or group of products.

profile. Settings associated with an administration account that determine the role and privacy settings to be applied to a user of the Web UI on the administration server. Because the administration server can manage multiple organizations, each account can have multiple profiles, each one defining settings related to a different organization.

R

role. A job function defined in the profile that identifies the tasks that a user can perform and the resources to which a user has access.

runtime server. A component that performs the following functions:
- Compiles inventory information about nodes that it receives from its agents and forwards the information to the administration server
- Provides a Web UI for the deployment of agents

S

signature. A definition of a file, registry entry, or other identifier included in the catalog that enables Tivoli License Compliance Manager to identify a product that is installed or in use on nodes.

software recognition signature. A signature, linked to a software component, that enables the agent to identify a product that is installed on a node.

software resources manager. A role that can produce reports.

software inventory administrator. A role that can create and manage the monitoring infrastructure of servers, agents, divisions, nodes, and application users, using tasks in the Manage Resources and Manage Components task groups.

T

target. Any part of a license management infrastructure that can have exclusive use of a license. A target can be a division, a node, or an agent, depending on how the target distribution parameters for the license are defined.

target distribution parameters. Rules associated with a license that limit the availability of the license to selected targets.

target type. The property of a license that specifies where the license is available in the organization's environment.

threshold. In license management, a percentage of the licenses available; if more than this percentage of licenses for a product is in use, notifications about the level of use are generated.

U

user. *See* application user.

use monitoring signature. A signature, linked to a software component, that enables the agent to identify a product that is in use on a node.

user distribution parameters. Rules associated with a license that limit the availability of the license to selected application users. The default setting is to allow all users of applications to access the license.

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