

USER GUIDE

WEB USER INTERFACE

Product	Snow License Manager
Version	9.1
Release date	2019-03-28
Document date	2019-03-28

CONTENTS

1 Introduction	5
1.1 Software Asset Management	5
1.2 Platform overview	5
1.3 Responsibility of the user	6
2 Concepts, terminology, and features	7
2.1 Software Asset Management (SAM)	7
2.2 Compliance	7
2.3 Software Recognition Service (SRS)	8
2.4 Application	8
2.5 License	9
2.6 Organization	18
2.7 Agreement	19
2.8 Software Store Option	20
2.9 Oracle database products	20
2.10 Windows VDA licensing for VDI environments	21
2.11 Microsoft CIDC report	22
2.12 Core factors	22
2.13 IBM PVU licensing	23
2.14 SAP information	24
2.15 Cloud	25
2.16 Software usage metering	25
3 Generic functionality	26
3.1 Login	26
3.2 The user interface	26
3.3 Manage lists	32
3.4 Search	34
3.5 Export	35
3.6 Category views	36
3.7 Manage documents and links	39
3.8 Data Update Job	39
4 Administrative tasks	40
4.1 Alert list	40
4.2 Snowboard	40
4.3 Administration overview	42
4.4 About your SLM agreement	53
4.5 Help and Support	53

4.6 User settings	53
4.7 Recalculate compliance	55
5 Applications	56
5.1 Application detail view	56
5.2 Manage applications	62
5.3 Application manufacturers	71
5.4 Application family overview	71
5.5 Application reports	72
6 Computers	73
6.1 Computers detail view	73
6.2 Manage computers	75
6.3 Mobile device details	78
6.4 Datacenters and Clusters	79
6.5 Devices	80
6.6 Computer and mobile device reports	81
7 Mobile devices	82
7.1 Edit mobile device	82
7.2 Delete mobile device	83
8 Datacenters and clusters	84
8.1 Add datacenter and cluster	84
8.2 Edit datacenters and clusters	85
9 Devices	86
9.1 Edit device	86
10 Users	87
10.1 Users detail view	87
10.2 Edit users	88
10.3 Delete user	89
10.4 User reports	89
11 Cloud	90
11.1 Microsoft Office 365	90
11.2 SaaS overview	94
11.3 Edit cost information	95
11.4 Cloud reports	97
12 Agreements	98
12.1 Agreements detail view	98
12.2 Manage agreements	99
12.3 Agreement reports	104

13 Licenses	105
13.1 License detail view	105
13.2 Manage licenses	106
13.3 License reports	116
14 Objects	117
14.1 Objects detail view	117
14.2 Manage objects	117
14.3 Objects type view	119
15 Enterprise	120
15.1 Oracle overview	120
15.2 SAP overview	127
16 Reports	129
16.1 About reports	129
16.2 Report types	129
16.3 Reports view	129
16.4 Manage reports	129
17 Import data	138
17.1 Introduction	138
17.2 Run import	139
17.3 Microsoft License Statement (MLS) file import	143
18 Appendix A - Compliance examples	144
18.1 Compliance example 1	144
18.2 Compliance example 2	148
18.3 Compliance example 3	151
18.4 Compliance example 4	155
19 Appendix B - Action log	159

1 INTRODUCTION

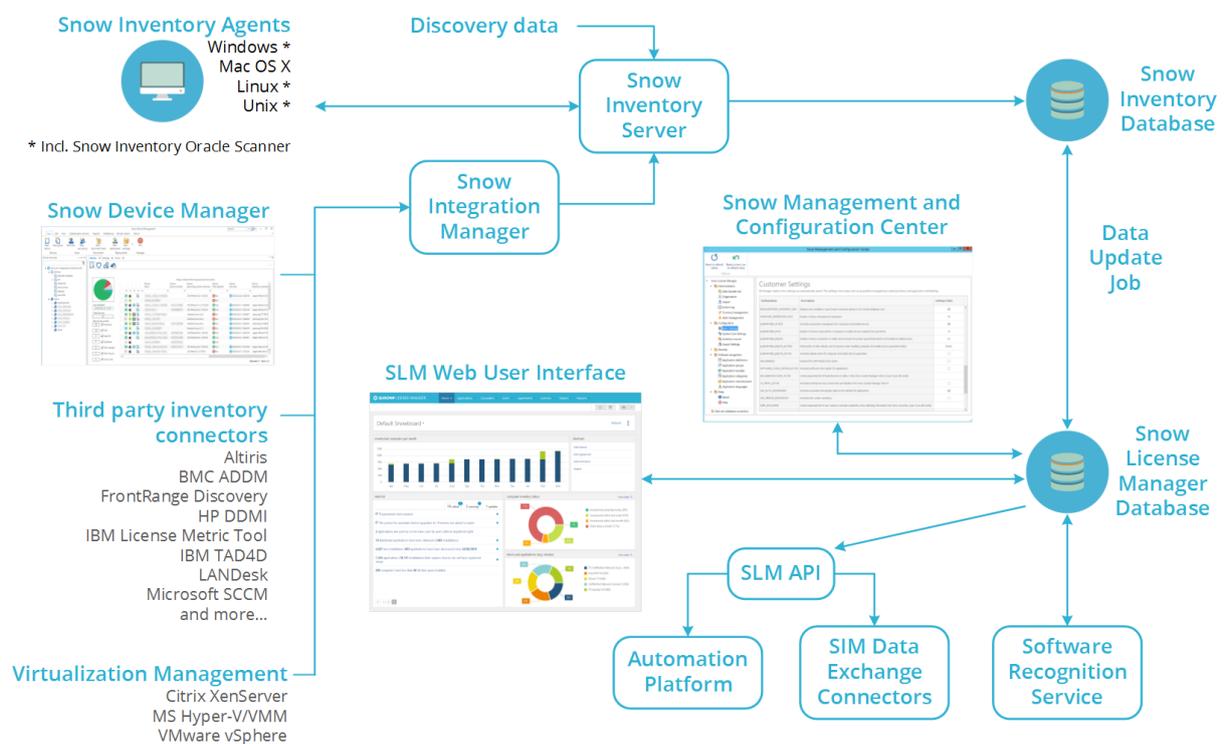
This document is a user guide for the Snow License Manager Web User Interface (SLM Web UI), a tool for Software Asset Management (SAM).

1.1 SOFTWARE ASSET MANAGEMENT

Software Asset Management (SAM) is the process of managing, controlling, and protecting software assets within an organization. SAM includes management of the entire life cycle of software, from need assessment, purchase, installation, and maintenance to removal.

1.2 PLATFORM OVERVIEW

The Snow License Manager platform includes a number of system components with dedicated functions.



INVENTORY SOURCES Computers, mobile devices, and servers in the IT environment are inventoried by the Snow Inventory Clients and Snow Device Manager, or information can be collected from third party inventory solutions and virtualization technologies.

SNOW INVENTORY Snow Inventory Server receives data from inventory sources, such as agents and third-party inventory solutions connected via Snow Integration Manager (SIM). After processing, the inventory data is stored in the **SnowInventory** database.

DATA UPDATE JOB	The Data Update Job is a daily recurring SQL job, which processes the information in the SnowInventory database into a more usable format for software asset management. The Data Update Job re-populates the Snow License Manager database with new and updated inventory information, applies software recognition rules, and calculates usage, and alerts.
SNOW UPDATE SERVICE	The Snow Update Service updates installed Snow software by downloading update files from Snow's central update server. The Snow Update Service is not illustrated in the Platform Overview.
SOFTWARE RECOGNITION SERVICE	Any unrecognized software is automatically sent to the Software Recognition Service (SRS) Desk for analysis. When an application has been identified, the SRS team creates new software filtering rules, and updates the central SRS database. Snow License Manager retrieves updates from the SRS database on a daily basis via Snow Update Service.
SNOW MANAGEMENT AND CONFIGURATION CENTER	Snow Management and Configuration Center is used to manage the technical and administrative parts of Snow License Manager.
SNOW LICENSE MANAGER WEB USER INTERFACE	The Snow License Manager Web User Interface (SLM Web UI) is the main user interface for Snow License Manager. This is where all information on software installations, usage, users, computers, mobile devices, licenses, and agreements is managed, as well as some administrative tasks.
AUTOMATION PLATFORM	The Automation Platform is used for automation of processes, such as SAM including software requests and re-harvesting based on usage or subscriptions.

1.3 RESPONSIBILITY OF THE USER

Snow License Manager is designed to efficiently manage large volumes of data and to provide competent tools for license compliance analysis, resource planning, cost administration, and much more. A lot of the information, such as inventory data and software recognition rules, is automatically fed into the system.

However, Snow License Manager also heavily relies on information not available through the inventory, in particular information on licenses. If the information entered by the user is incorrect or incomplete, the output will not be accurate.

Understanding central concepts is vital in order to achieve reliable results from Snow License Manager. All users of the SLM Web UI are advised to read and understand [Concepts, terminology, and features](#).

2 CONCEPTS, TERMINOLOGY, AND FEATURES

The following chapter explains concepts, terms, functions, and features that are vital to understand when using the SLM Web UI, in order to achieve correct results from Snow License Manager.

2.1 SOFTWARE ASSET MANAGEMENT (SAM)

Software Asset Management, or SAM, is defined by ISO as “effective management, control, and protection of software assets within an organization”.

A **global SAM owner** is an individual at a central organization wide level who is in charge of Software Asset Management. A **local SAM owner** is an individual in charge of SAM for a defined node or section of an organization. Local SAM owners are sub-ordinated to the global SAM owner.

2.2 COMPLIANCE

The term **compliance** is used to indicate that an organization is legally and correctly licensed, meaning that the organization has the amount of licenses that is required to cover its usage of applications.

Snow License Manager regularly establishes a compliance statement for the IT environment. This means that the installed applications are matched with the stock of purchased licenses.

If all applications that require a license are covered, the organization is compliant. An organization that is over-licensed is still compliant, while an organization with too few licenses is non-compliant. Obviously there are applications that are free to use without any license. These applications have no effect on compliance.

2.2.1 LICENSE REQUIREMENT

License requirement states the number of licenses that is required to ensure compliance for an application with the selected metric. For example, for applications with the default metric **Installations**, the license requirement is the number of installations of the application that require a license.

The license requirement states the number of required stand-alone licenses. Applications installed as part of a bundle are not included, since they require a suite license.

License requirement for an application is indicated by the graphics in the **Application details view**, see [Application](#).

2.2.2 LICENSE TRACKING

The License tracking functionality in Snow License Manager provides the administrator with detailed information on the entitlement state of each application. The entitlement state describes to what extent a consumer (computer, user, or device) is covered by the available entitlement. The administrator gets an overview of what license and what agreement covers which consumer, which limits the risk of licensing the same consumer twice. This information is available both in the application details, and in the computer, user, and device details.

2.3 SOFTWARE RECOGNITION SERVICE (SRS)

Software Recognition Service (SRS) is a service developed by Snow Software, which automatically identifies software in an IT environment. The SRS basically consists of a central database and an automated process for identification of unrecognized software.

All subscribers of the SRS service have access to the central database, which includes rules for recognition of hundreds of thousands of software applications, ranging from commonly used commercial applications to freeware, games, file sharing clients, and poker clients. The number is steadily increasing as new applications constantly show up on the global market.

Based on the information from the SRS database, the local Snow License Manager is capable of identifying inventoried applications by name, manufacturer, version, and edition. Also, the database allows Snow License Manager to detect if the application was installed as part of a product suite and identify any upgrade and downgrade possibilities.

Any unrecognized software is automatically sent to the Software Recognition Service Desk. The experienced members of the SRS team analyze and identify the application and update the SRS database with the new information. Up-to-date filtering rules for software identification are sent to all subscribers of the Software Recognition Service and the information is automatically stored in the local Snow License Manager.

2.4 APPLICATION

In Snow License Manager, an **application** is defined as software installed or run on a computer or device. Each application is associated with filtering rules, which are used to identify programs installed on the inventoried computers.

Applications are normally created by the SRS team and distributed to all subscribers of the Software Recognition Service. As a complement, there may also be customized applications, created locally in Snow Management and Configuration Center (Snow MACC).

2.4.1 APPLICATION BUNDLE

Some applications can be installed both as a stand-alone product and as part of a product suite. Normally, different licenses are required depending on the type of installation. For example, even though Photoshop is included in the Adobe Creative Suite, a stand-alone installation of Photoshop cannot be covered by a license applicable to the Adobe Creative Suite.

For a correct compliance calculation, Snow License Manager needs to be able to determine if an identified application is a stand-alone or product suite installation. The mechanism used to identify installations that are part of a product suite is called an *application bundle*. Application bundles are administered via the Software Recognition Service.

2.4.1.1 LICENSE BUNDLE COMPONENTS INDIVIDUALLY

In some cases it may be allowed to use the installation media of a product suite to install single components, for example components included in the Adobe Creative Suite. These stand-alone installations are then licensed individually instead of via the application bundle.

In Snow License Manager this is achieved by manually removing the application bundle from the computer. All installed bundle components will be regarded as stand-alone installations when compliance is calculated. For more information, see [Bundle options](#).

2.4.2 APPLICATION FAMILY

Upgrade and downgrade refer to the extended right to use a license also for the preceding and/or subsequent versions. For more information, see [Upgrade and downgrade](#).

The way to manage upgrade/downgrade rights is referred to as **application family**. An application family contains all products from the same product family. Application families are administered via the Software Recognition Service.

2.4.3 APPLICATION TYPE

An **application type** is a classification based on function, according to the United Nations Standard Products and Services Code (UNSPSC). This enables listing of for example all virus applications in the IT environment, without having to know the manufacturer or the application name. The application types are administered via the Software Recognition Service.

2.4.4 APPLICATION CATEGORY

Application categories are created in Snow MACC for a set of applications that have something in common. Application categories can for example be used to specify the standard applications that, according to the IT policy of the organization, should be installed on all computers and laptops.

The report **Computers that do not comply to application categories** lists all computers/laptops that are missing the applications specified by the application category.

2.4.5 APPLICATION USE RIGHTS

Application use rights can be assigned to applications, for example in order to monitor and ensure correct usage of expensive applications. Users without use rights of the application are highlighted. Application use rights are managed in the SLM Web UI.

2.4.6 STOCK-KEEPING UNIT (SKU)

Stock-keeping unit, or SKU, is a code used to identify and track products, and most manufacturers assign SKUs to their applications. A unique SKU is assigned to each variant of the application, such as different versions, bundles, metric, etc. This means that an application can have one or several SKUs. In Snow License Manager, licenses can be identified by the SKU of the application it applies to. There is also SKU intelligence when registering a license purchase and when importing licenses.

2.5 LICENSE

A license is something you purchase to have the right to use a software application. Suppliers of software can issue licenses in many different variants, resulting in a large variety of licensing conditions. An application may also be offered with several different license options. The simplest form of license is one that permits one installation of a specified version of an application. More advanced licenses may permit several installations or multiple users, as well as the right to upgrade to a later version of the application.

The alert and report functionality in Snow License Manager helps the administrators identifying licenses that are not used correctly. This provides a possibility to make corrections to better utilize existing licenses and obtain maximum license usage.

2.5.1 METRIC

The metric describes the licensing conditions and is the unit of measure for applications and licenses.

The **metric for the application**, or the default metric, is identified by the Software Recognition Service (SRS). However, the default metric can be changed in Snow License Manager. The default metric is set per application, meaning that an application can have only one default metric.

Available **metrics for the license** depend on the metric of the application. While there can only be one metric per application, it is possible to register license purchases with different metrics. In Snow License Manager, metric is set and any additional information related to the license can be entered when a license purchase is registered.

Snow License Manager supports the metrics described in the following table. For information on how to configure metering periods, see [License settings tab](#).

Default metric	Description	Available metrics for the license
No license required	This metric is used for applications that do not require a license.	-
Installations	The number of licenses is compared to the number of installations of the application.	Installations Number of processor cores Number of processors CAL (Client Access License)
Custom compare values	This special metric allows definition of custom values to be used as basis for compliance calculations. The number of licenses is compared to the quantities of the custom compare value defined for the application.	The defined custom compare values types
Number of processors	The number of licenses is compared to the number of processors on a computer.	Installations Number of processor cores Number of processors CAL (Client Access License)
Number of processor cores	The number of licenses is compared to the number of processor cores on a computer.	Installations Number of processor cores Number of processors CAL (Client Access License)
Users	The number of licenses is compared to the total number of inventoried users utilizing the application, regardless of number of installations. The total user metric setting will determine the number of users that require a license.	Users

Default metric	Description	Available metrics for the license
Devices	<p>The number of licenses is compared to the total number of inventoried devices utilizing the application, regardless of number of installations. The default metering period is set to current month but can be changed to a rolling period of days by editing the application in Snow License Manager.</p> <p>This metric is often used for Terminal server or Citrix environments</p>	Devices
Concurrent users	<p>The number of licenses is compared to the highest total number of users utilizing the application simultaneously in the one hour period with the most usage. The default metering period is set to current month but can be changed to a rolling period of days by editing the application in Snow License Manager.</p> <p>This metric is often used for Terminal server or Citrix environments.</p>	Concurrent users
Concurrent devices	<p>The number of licenses is compared to the highest total number of devices utilizing the application simultaneously in the one hour period with the most usage. The default metering period is set to current month but can be changed to a rolling period of days by editing the application in Snow License Manager.</p> <p>This metric is often used for Terminal server or Citrix environments.</p>	Concurrent devices
PVU	Based on the IBM PVU (Processor Value Unit) values of the computers.	PVU
CAL (Client Access License)	Permits a client (computer, device, or user) to connect to server software. The CAL metric is only a registration of number of licenses. No compliance is calculated based on this metric.	Installations Number of processor cores Number of processors CAL (Client Access License)

2.5.1.1 ASSIGNMENT TYPES

The license is assigned to a specified organization, site, computer/datacenter or user. The available assignment types of a license depend on the metric and is described in the following table.

Metric for the license	Available assignment types
Installations	Organization Site Computer/datacenter User
Custom compare values	Organization
Number of processor cores	Computer/datacenter
Number of processors	Computer/datacenter
Users	Organization Users
Devices	Organization
Concurrent users	Organization
Concurrent devices	Organization
PVU	Organization
CAL (Client Access License)	Organization

The assignment types are described in the following table.

Assignment type	Description
Organization	The license is assigned to organization nodes.
Computer/datacenter	The license is assigned to specified computers/datacenters.
User	The license is assigned to specified users.
Site	The license is assigned to a specified organization node.

2.5.2 ORACLE SPECIFIC LICENSE TYPES

The license type for an Oracle product is the unit of measurement for the Oracle license. To see details about an Oracle product in Snow License Manager the Oracle Management Option needs to be installed.

Snow License Manager supports the following Oracle specific license types:

License type	Description
Full use	License limit is based on any application and interaction with third party procurement (3PP) and unrestricted development rights.
Application specific full use	The license is application specific for a single independent software vendor (ISV) application and has restricted development rights and no interaction with a 3PP.
Application specific	The license is application specific for a single independent software vendor (ISV) application and has limited development rights and no 3PP usage is allowed.

License type	Description
Embedded	This license type is used when Oracle is embedded in the independent software vendor's application. It is impossible for end customers to detect underlying data schema or tables.
Runtime	License with restricted usage in conjunction with the specific independent software vendor's application with no modification rights.
Limited Use Other	This license type is used when end customers have an agreement with provisions not covered under any of the other supported Oracle specific license types. What this actually means varies between customers.

2.5.3 UPGRADE AND DOWNGRADE

Upgrade and downgrade refer to the extended right to use a license not only for the application it was purchased for, but also for one or several of the preceding and/or subsequent versions. The upgrade/downgrade path specifies which versions the application can be upgraded or downgraded to, and in what sequence – and still be covered by the same license. The paths also make it easy to track the original license for upgraded licenses, regardless of whether the manufacturer or application has changed names.

A common example of upgrade rights is automatic upgrade agreements, which entitle you to stay current with all new releases of the application, without any license renewal.

Also licenses with downgrade rights offer flexibility, as illustrated by the following example.

EXAMPLE

You have purchased 100 licenses for Application 10, which also include the two previous versions. You can use these licenses to cover in total 100 installations of Application 10, 9 and/or 8. Should any of the users of Application 9 or Application 8 choose to upgrade to Application 10, they are still covered by the same license.

2.5.3.1 AUTOMATED HANDLING OF UPGRADES AND DOWNGRADES

Snow License Manager offers full support for automated handling of upgrades and downgrades. Upgrade/downgrade rights are part of the Software Recognition Service analysis and the results reside in Snow License Manager.

To enable the computerized intelligence, you need to ensure that the correct agreement, license, and application settings are made:

- Upgrade rights**
 Upgrade rights can be enabled for the agreement or for each license purchase. Upgrade entitlement will be applied to the highest version, as stipulated by the entered license/agreement.
- Downgrade rights**
 Downgrade rights must be enabled for the application, and for each license purchase. Optionally, you can manually define the downgrade path, by adding or removing application versions and changing the order. Manual path definitions override cross edition rights and downgrade paths identified by the Software Recognition Service.

2.5.3.2 RELEASE DATE

For licenses that are attached to an agreement with automatic upgrade enabled, the release date of the application is of major importance. These licenses permit you to use the latest version of

the application that is available over the active contractual period – also after the end date of the agreement. In other words, if a new version of an application is released while you have an active agreement, you can upgrade to this very version also when the agreement has expired, at no additional cost.

The release date for each application is collected from the Software Recognition Service and is presented in Snow License Manager. You can use the information to see if there is a possibility to upgrade users to later versions without having to pay for it. The information is also used by the system when compliance is calculated, to optimize the allocation of licenses.

2.5.4 ALLOCATION

When a license purchase is registered, you specify the legal organization owning the license. Also, you have the option to enable automatic allocation, or to manually allocate licenses to non-legal organizations.

For optimal utilization of the license ownership, it is recommended to use the automatic allocation feature instead of manual allocation. Automatic allocation is enabled when registering a license, see [Assignment tab](#).

2.5.4.1 AUTOMATIC ALLOCATION

With the automatic allocation functionality enabled, purchased licenses are automatically distributed to nodes in the organization hierarchy, based on the licensing requirements for each node. Licenses that are purchased on a central level of the organization will then automatically be distributed to underlying organization units based on actual installations. All licenses with automatic allocation enabled will be re-allocated each time compliance is calculated.

Automatic allocation is especially important to take into account for licenses with downgrade rights enabled. When both automatic allocation and downgrade rights are activated, licenses are compared to installations of the same and the specified prior versions of an application, on all sub-levels of the legal organization owning the license.

If automatic allocation is deactivated and no manual allocation has been made, the licenses for the specific purchase will only be compared to installations on the same organization level as the purchase is registered at. If downgrade is activated, installations of prior versions on the same organization level will be taken into account.

2.5.4.2 MANUAL ALLOCATION

It is also possible to manually specify how licenses should be allocated. Manually allocated licenses will not be included in the automated allocation. When compliance is calculated, manually allocated licenses will only be used to cover applications within the organization node that these licenses have been allocated to.

2.5.5 CROSS EDITION RIGHTS

Some software suppliers offer licensing rights where a license could cover other installations within the application family, with the same and/or lower edition. In Snow License Manager this is called Cross edition rights.

Cross edition rights are included in licenses with the following metrics and assignment types:

Metric	Assignment type
Installations	Computer/datacenter Organization
Number of processors	Computer/datacenter
Number of processor cores	Computer/datacenter

Also, cross edition rights can interact with upgrade and downgrade rights.

EXAMPLE

A license for Microsoft Windows Server 2012 Datacenter with cross edition rights could cover Microsoft Windows Server 2012 Standard, as well (same version, lower edition).

A license for Microsoft Windows Server 2012 Datacenter with upgrade rights and cross edition rights could cover Microsoft Windows Server 2012 R2 Standard, as well (higher version, lower edition).

NOTE

A manually defined downgrade path will override the cross edition rights.

2.5.6 CROSS PLATFORM RIGHTS

There are applications with licensing conditions that permit installation on more than one type of operating system. In Snow License Manager this is called Cross platform rights.

Just as cross edition rights, cross platform rights can interact with upgrade and downgrade rights.

EXAMPLE

A license for Adobe Acrobat 8 Professional with cross platform rights could cover installations of Adobe Acrobat 8 Professional on both Windows and Mac operating systems (same version, same edition).

A license for Adobe Acrobat 8 Professional with upgrade rights and cross platform rights could cover installations of Adobe Acrobat X Pro as well (higher version, same edition), on both Windows and Mac operating systems.

2.5.7 MULTIPLE VERSIONS/EDITIONS

Licensing conditions for some applications permit you to install and run several versions of the application at the same time. A subset of these rights is that multiple editions are allowed as well. This means that one license is enough to cover installations of more than one version/edition of the application.

When compliance is calculated, multiple version/edition is only considered if the appropriate setting for the application has been made in the SLM Web UI, see [License settings tab](#).

2.5.8 SECONDARY USE RIGHTS

Some software suppliers offer licensing features for “Home PC – Work PC” or “Desktop – Laptop”, also referred to as Secondary use rights. With this type of feature, one single license covers two installations of the same application on two separate computers, for instance one desktop and one laptop.

To manage this feature from a compliance perspective, secondary use rights must be enabled for the application and a connection must be established between the two sibling computers in Snow License Manager. Sibling computers can be specified either manually or by using an automated function which establishes connections based on identified primary users of computers within the same organization. For automated handling of sibling computers, contact Snow Software for implementation in your environment.

Snow License Manager also supports Secondary use rights for TS environments, with locally installed software on rich clients.

2.5.9 VM USE RIGHTS

Certain licensing rules allow for covering not only the physical host but also associated virtual machines. With VM use rights, each licensed installation entitles the use of a fixed or an unlimited number of virtual instances of the application.

VM use rights are registered when adding a license purchase and can only be registered for licenses with assignment type Computer/datacenter. Note that VM use rights will only be applied to associated virtual machines if the physical host is fully compliant.

EXAMPLE

A computer is assigned four licenses. VM use rights allow each assigned license to be used on three virtual instances. This means that the four assigned licenses can cover 12 virtual machines.

EXAMPLE

From one license purchase, Server A is assigned eight licenses and Server B is assigned four licenses. VM use rights allow each assigned license to be used on one virtual instance per server.

Server A has 16 associated virtual machines. The VM use rights for Server A are changed so that eight specific virtual machines are assigned a license each. The remaining ones need to be covered by another license purchase. The changed VM use rights for Server A overrides the original VM use rights.

The VM use rights for Server B are not changed and will continue to be dynamically assigned as needed. The four assigned licenses are still allowed to be used on four virtual instances.

2.5.10 EXTENDED COVERAGE

Extended coverage means that one single license covers two installations of the same application on two separate computers or datacenters/clusters. Extended coverage is used for passive cluster nodes, disaster recovery test/development environments, and/or for a customer specific reason i.e. a customer specific agreement with extended user rights of the product.

You need to specify the computer or datacenter/cluster the coverage should be extended to, for which application, and for what reason, see [Extended coverage tab](#) (Computers) and [Extended coverage tab](#) (Datacenters and clusters).

2.5.11 SUBSCRIPTION LICENSE

Instead of purchasing a license, you can subscribe to the right to use an application. A subscription license is only valid for a specified period. Once the period has past, the license will no longer be included in the compliance calculation. However, subscription licenses attached to a subscription agreement will have their period overridden by the agreement period. For more information, see [Subscription agreement](#).

In Snow License Manager, information on expired subscription licenses can be found here:

- In **Application details** and on the **Compliance** tab, information is shown on number of **Expired subscription licenses**.

2.5.12 LICENSE REGISTRATION POLICY

All processes and routines are dependent on all participants learning, understanding, and following instructions and policies. Snow License Manager allows you to facilitate registration of licenses and help the users to enter the correct information. You can make fields mandatory, add lists with pre-defined options, and add descriptions that clearly state the intended purpose of a specific field.

Correct registrations of license purchases will reduce the overall administration and prove a better foundation for your software asset management. The License registration policy is managed in the SLM Web UI, see [Custom compare value types](#) and [Ensure correct license registrations](#).

2.5.13 INCOMPLETE LICENSES

The Incomplete licenses functionality makes it possible to import and/or register license purchases even though all required information is not available for the purchase to be used as a valid entitlement. You can for example import licenses from a file with incomplete data and then add the required information at a later stage.

License purchases with missing data are marked as incomplete and will not be included when compliance is calculated. Examples of data that will make the license purchase incomplete, if missing, are application name and quantity.

The Incomplete licenses functionality is activated by a setting in Snow MACC.

NOTE

Fields that are indicated as Required in the License Policy must be entered during license registration or the license cannot be saved, not even as incomplete.

2.5.14 UNASSIGNED LICENSES

A license is regarded as unassigned when a license purchase has been registered with an assignment type and a quantity, but no assignments have been made, or assignments have only been made for a part of the license quantity.

In Snow License Manager, information on unassigned licenses can be found here:

- In **Application details** and on the **Compliance** tab, see information on number of **Unassigned** licenses.
- In the report **All licenses**, add the column **Unassigned licenses** from the Column selector.
- In the alert report **Unassigned licenses**.

For assignment type Computer/datacenter:

- In **License details** and on the **Assignment** tab, information is shown on number of **Total licenses**, number of **Total assigned** licenses, and number of **Total remaining** licenses to be assigned.

2.5.15 INVALID LICENSE ASSIGNMENTS

A license is regarded as invalidly assigned when a license purchase has been registered with an assignment type and a quantity, and assignments have been made but conditions might have changed.

NOTE

Only licenses with assignment type **Computer/datacenter** or **User** risk to be invalidly assigned. Licenses with assignment type **Organization** or **Site** are automatically distributed within the specified organization, or cover the specified site.

Examples of scenarios where a license is considered invalid:

- The license has been assigned to a deleted user or computer, or to an inactive computer.
- The license has been assigned to a computer/datacenter, but the assigned quantity exceeds the required quantity.
- The license has been assigned to a computer/datacenter, but the application/family is not installed on that computer/datacenter
- The license has been assigned to a user that has not used the application nor any application in the family within the specified metering period.

In Snow License Manager, information on invalid license assignments can be found here:

- In **Application details** and on the **Compliance** tab, see information on number of licenses with **Invalid assignments**.
- In the report **All licenses**, add the column **Invalid assignment** from the Column selector.
- In the alert report **Invalid license assignments** and the column **Reasons for invalid assignments**.

For assignment type Computer/datacenter:

- In **License details** and on the **Assignment** tab, see reasons for any discrepancies

2.6 ORGANIZATION

An organization structure enables analysis of software and hardware assets based on cost center or department. The organization structure is created in Snow Management and Configuration Center (Snow MACC).

The top-level of the company is normally registered as the legal organization; that is, the legal entity that owns software and hardware assets. If the organization has multiple legal entities, there can be multiple legal organization nodes. Nodes that are not legal, typically nodes further down in the organization hierarchy, are referred to as non-legal organization nodes.

All computers, devices, and users in Snow License Manager are attached to a node in the organization hierarchy. Licenses are always registered for a legal organization node, but can be allocated to the non-legal organization nodes.

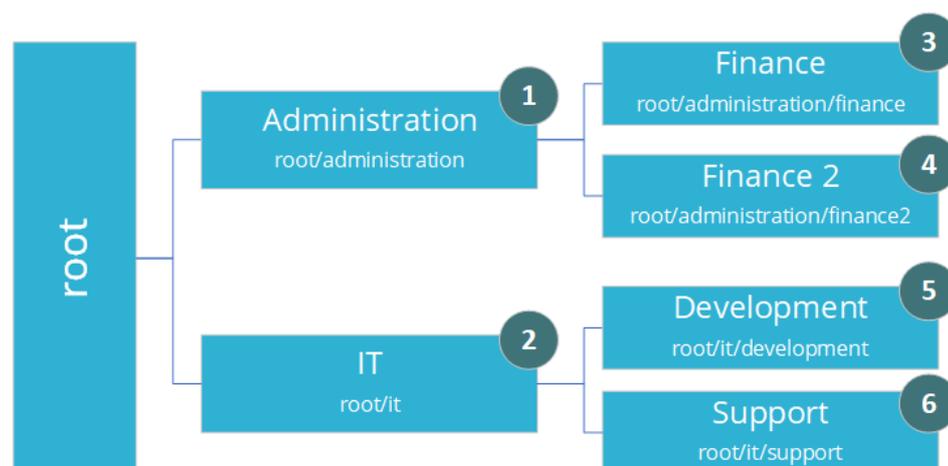
2.6.1 AUTO CONNECT RULES

Auto connect rules facilitates management of the organization by automatically assigning computers, devices, and users to the right place in the organization structure. This is achieved by defining one or several filters (rules), based on for example host name, IP address, or user name. Auto connect rules allows you to set up your organization structure once, with no need for further management. Auto connect rules are created in Snow MACC.

Auto connect rules are processed in falling sequence per node level. All nodes on one level will be processed first, then the nearest sub-node level will be processed.

The numbers indicate the order in which the Auto connect rules are applied.

EXAMPLE



2.7 AGREEMENT

Snow License Manager supports six agreement types, described in the following table. It is also possible to create custom agreement types, intended for agreements that do not match any of the pre-defined agreement types.

Agreement type	Description
Software agreement	The only agreement type that allows attachment of licenses.
Maintenance agreement	Hardware maintenance only.
Support agreement	Hardware support agreements only.
Purchase agreement	Hardware purchase agreements only.

Agreement type	Description
Custom agreements	A general agreement type that can be used for any agreement.
Oracle agreement	Oracle agreements only, such as Oracle Support and Software Updates Agreement or an Oracle ULA (Unlimited License Agreement).

2.7.1 MASTER AGREEMENT

A master agreement is an agreement that controls the terms, conditions, and dates of subordinate agreements or tasks. Master agreements can also carry licenses or other objects in the system.

2.7.2 SUB-AGREEMENT

A sub-agreement is an agreement signed within another agreement, a master agreement.

2.7.3 SUBSCRIPTION AGREEMENT

A subscription agreement is only valid for a specified period. Licenses that are part of a subscription agreement are only valid over the validity period of the agreement. Subscription licenses attached to a subscription agreement will have their period overridden by the agreement period. For example if a subscription license's specified period expires after the subscription agreement's specified period, the subscription license will not be considered in compliance once the subscription agreement period has expired.

In practice, there are two different ways to manage subscription depending on how expiration is handled by the product use rights:

- If all of your licenses within an agreement expire when the agreement does, you should create the agreement as a subscription agreement and you will not need to add periods to each license you attach.
- If you have licenses within your agreement that expire at different times, or will expire after the agreement is renewed, you should not add the agreement as a subscription agreement, and should instead add the subscription periods when adding each license purchase.

2.8 SOFTWARE STORE OPTION

Snow's Software Store Option enables organizations to provide a self-service portal for software requests that empowers their end users while giving greater control to the SAM team. By accessing an automated online software catalog that is populated and controlled by Snow License Manager, users can select for themselves what software they need.

Applications that should be available to the users must have the **Available in Software Store** option enabled in Snow License Manager. All changes in application availability are written to the Action log in Snow License Manager, and the report **Applications in Software Store** gives an overview of currently available applications.

2.9 ORACLE DATABASE PRODUCTS

Oracle licensing is complex, with intricate rules and dependencies. In order to determine if you are correctly licensed, you need to know exactly what Oracle products are installed and used in your IT environment as well as the hardware configuration of the servers running Oracle. You also need to have full control over all Oracle agreements and orders.

The Oracle Management Option (OMO) is a product developed by Snow Software for asset management of Oracle database products. The Oracle Management Option inventory scan automatically supplies details about all Oracle products and database instances. The scan is based on the Oracle LMS (License Management Services) scripts and follows the LMS guidelines, thus ensuring full Oracle compatibility. The outcome of the inventory scan is presented in the SLM Web UI.

While the inventory scan automatically supplies necessary information, all Oracle agreements and orders have to be registered manually. You also need to manually associate the Oracle orders to the Oracle servers. For step-by-step instructions on the registration process, see [Register an Oracle purchase](#)

No automatic compliance calculation is performed by Snow License Manager for Oracle database products. However, with all information available in one place, the Oracle licensing responsible can be assured to always have the correct and up-to-date information on deployments, orders, options, and management packs to ensure legal compliance. Snow License Manager supports the compliance analysis process by dedicated reports and alerts over Oracle servers not covered by a license. It is also possible to generate and export reports in the format required when submitting a declaration to Oracle, i.e. the Oracle Server Worksheet (OSW) report.

2.10 WINDOWS VDA LICENSING FOR VDI ENVIRONMENTS

Virtual Desktop Infrastructure (VDI) technologies enable users to access their work desktops from almost any device.

Every device connecting to a Windows VDI will require virtual desktop access rights. If the accessing device is a computer covered by a Windows license with valid Software Assurance, the virtual desktop access rights are included. For other devices, a Windows Virtual Desktop Access (VDA) license is required. For the Windows VDA licenses, 90-day reassignment rights apply, which means that a license cannot be reassigned to another device within 90 days of the last assignment.

Snow License Manager identifies all devices that have been connected to a VDI. The device may, for example, be a home PC, a smartphone, or a thin client, but it could also be an inventoried computer. Snow License Manager then adds the application Windows Virtual Desktop Access to all of these devices.

2.10.1 LICENSE REQUIREMENTS

When Snow License Manager calculates the license requirement for the Windows Virtual Desktop Access, the following rules apply:

- If the device is an inventoried computer and if the computer is covered by a Windows license with valid Software Assurance, no Windows VDA license is required.
- If the device is an inventoried computer with a Windows license without Software Assurance, a Windows VDA license is required.
- If the device is an inventoried computer not covered by a Windows license, a Windows VDA license is required.
- If the device is not an inventoried computer, a Windows VDA license is required.
- A Windows VDA license can be reassigned after 90-days.

The Windows operating systems on the Virtual Desktops (VDI) do not require a Windows client license and are automatically removed from the license requirements for the Windows operating

system they run, this is illustrated by the VDI remark on the computer as well as under license requirements when looking at the information details.

The management of Windows VDA licensing in Snow License Manager is automated. However, to ensure correct license allocation, all purchases of Windows licenses with Software Assurance must be registered with upgrade rights enabled.

Licensing is also required for the server and management infrastructure of the VDI solution. As a support in the licensing of the VDI structure (Microsoft or other supplier), Snow License Manager provides dedicated stock reports:

- All devices that have accessed a VDI
- All users that have accessed a VDI

2.11 MICROSOFT CIDC REPORT

The Microsoft WorkSpace is a web-based analysis program designed for Microsoft Partners to manage their SAM engagements. Microsoft Partners upload inventory data to the WorkSpace using an input template called Clean Inventory Data Contract (CIDC), an Excel spreadsheet containing detailed inventory information.

Snow License Manager can export inventory data directly into the CIDC format. For detailed instructions of how to generate a CIDC report, see [Generate a Microsoft CIDC](#).

2.12 CORE FACTORS

For some software, manufacturers like Microsoft and Oracle use core factors for licensing on particular hardware configurations. The core factor is a numerical value that is associated with a specific physical processor type, and is multiplied with the actual number of processor cores to calculate the license requirement.

Software that can be licensed based on a core factor is automatically defined in Snow License Manager, and information can be found here:

- In **Application details**:
 - On the **Information** tab, see if the application can be **Licensed based on core factors** (Yes/No).
 - On the **Licenses** tab, click **Tracking** to see a list of all license consumers. Click the arrow in the **Required** column to see if a core factor has been used in the license requirements calculation.
 - On the **Compliance** tab, see information on any **Core factor adjustment** in the **Required licenses** section.
- In the **All applications** report, add the column **Licensed based on core factors**.

2.12.1 MICROSOFT

With the release of SQL Server 2012, Microsoft introduced a new model for licensing of server software based on computing power. In this licensing model, physical processor cores are used as metric instead of, as previously, physical processors. This Per Core model can be used for installations of SQL Server and BizTalk Server.

For more information on the Per Core model and the current Microsoft Core Factor Table, refer to documentation from Microsoft.

2.12.1.1 LICENSABLE CORES

Snow License Manager uses the **Microsoft Core factor table** to calculate the number of **Licensable cores** for a particular hardware configuration (and a physical processor type) where:

Licensable cores = Processors cores x Core factor

In Snow License Manager, the number of licensable cores are automatically calculated for all physical computers running server operating systems. In this way the customers are able to get an indication of the license requirement for a core-based application prior to a deployment. The licensable cores figure is only applied when there is a product to be covered.

In Snow License Manager, information for the computer can be found here:

- In **Computerdetails** and on the **Information** tab, see information on **Microsoft Core Factor** and number of **Licensable Cores**
- In the **Applications per computer** report, add the columns **Core factor**, **Core factor table**, and **Licensable cores** from the column selector. For comparison, add also the columns **Processors** and **Processor cores**.

2.12.2 ORACLE

Snow License Manager uses the Oracle Processor Core Factor Table to show the current Core Processor Licensing Factor for a particular physical hardware configuration where Oracle software is installed. In Snow License Manager, information on this licensing factor can be found here:

- In **Computer details** and on the **Information** tab, see information on the current **Oracle Processor Core Factor**.
- In the column **Core factor** of the reports **All Oracle database servers**, **All Oracle databases per server**, and **Unused Oracle options per server**.

For more information on the Core Processor Licensing Factor, refer to documentation from Oracle.

2.13 IBM PVU LICENSING

Processor Value Unit (PVU) is a unit of measure by which an IBM software can be licensed. The number of required PVU entitlements is based on the processor model and by the number of processors made available to the software. IBM continues to define a processor, for the purpose of PVU-based licensing, to be each processor core on a chip (socket). A dual-core processor chip, for example, has two processor cores.

In Snow License Manager, IBM PVU licensing is managed by the metric PVU, which is defined to use the PVU values of the computers as basis for the compliance calculation.

The IBM License Metric Tool (ILMT) automatically determines the required PVU for each computer, as part of the inventory of the machine. This information can be automatically integrated with Snow License Manager to define which PVU value to use for each installation. Integration of ILMT data is done via the Snow Integration Manager (SIM).

In Snow License Manager, information on PVU values can be found here:

- In the **List all computers** view, add the column **PVU per core** from the column selector
- In **Computer details** and on the **Information** tab, see information on **PVU per core**

Also, the administrator will be alerted on any licenses for IBM software that are registered with other metrics than PVU:

- The alert **There is [number] licenses with incompatible metrics for PVU licensed IBM applications** in **Licenses overview**

2.13.1 FULL CAPACITY AND SUB CAPACITY

Some software products from IBM, that are licensed based on the metric PVU and can be deployed in a virtualized server environment, can be licensed according to *Full capacity* or *Sub capacity* (virtualization capacity).

- **Full capacity**
Number of required PVU licenses is based on the physical core capacity of the server (every physical, activated processor core) where the IBM software is installed.
- **Sub capacity**
Number of required PVU licenses is based on the virtual core capacity of a partition or a virtual machine available to the IBM software.

The sum of all sub capacity requirements for the virtual machines cannot exceed the full capacity of the physical server hosting the virtual machines. Information on installations that are eligible for sub capacity licensing is gathered by ILMT and can be integrated in Snow License Manager via Snow Integration Manager (SIM).

NOTE

In order to be eligible for sub capacity licensing, all virtual machines of a host must be recognized by ILMT. Otherwise, the host needs to be licensed through full capacity licensing.

Snow License Manager will alert the SAM administrator on computers that are running IBM applications with the metric PVU, but for which ILMT is lacking information:

- In the alert **There are [number] of computers with IBM PVU-based products installed without data from ILMT** in **Computers overview**
- In the report **Computers with IBM PVU based products without data from ILMT**

For information on software products, virtualization technologies, and processor technologies that are eligible for sub capacity licensing, refer to documentation from IBM.

2.14 SAP INFORMATION

The Snow Optimizer for SAP Software analyses transactional and individual usage data, identifies duplicate SAP users and unused licenses, giving the customers an opportunity to reduce costs and liabilities. Also, the solution can automatically recommend “best-fit” metrics based on current behavior of the users.

Information from Snow Optimizer for SAP Software can be integrated into Snow License Manager using automated or manual file imports. When imported, the information is available on the **SAP overview** page as well as in the report **All SAP user accounts**.

2.15 CLOUD

Cloud technologies encompass both Software and Infrastructure that you purchase as a service on an ongoing basis, as opposed to on premise infrastructure and software that is bought with a perpetual model. The following definitions are central concepts in cloud technologies:

- **Subscription plan** - A specific type of subscription that includes a group of entitlements, typically assigned to a user. Software as a Service (SaaS) offerings are often licensed per subscription plan.
- **Web application** - An application that is accessed via a web browser, typically hosted by a software manufacturer.
- **Microsoft Office 365 Estate** - All of an organization's Microsoft Office 365 accounts, subscriptions and users.

2.16 SOFTWARE USAGE METERING

Software usage, for example information about who is using an application and when the application was last used, is shown in Snow License Manager web user interface. The following software usage metering data is shown for applications with a registered usage:

- **Name:** The name of the user that was using the application.
- **Last used:** The date and time of the last known usage of the application. The date and time settings, for example time zone, of the local computer is used.
- **Run:** How many times the application has been started. For more information, see the User Guide for Snow Inventory Agent for Windows.
- **Total time (days:hh:mm):** The total duration that the application has been run. The total time does not include time when the screen is locked, in sleep mode, or hibernated. Multiple instances of the same application are disregarded. For example, if a user has ten Microsoft Word documents open for an hour, the total time is one hour and not ten hours.
- **Per run (hh:mm):** The average time per run. For example, the average time per run is 44 min if the total time is 22 hours and the application has been run 30 times.

3 GENERIC FUNCTIONALITY

The following chapter describes information and functions that are the same throughout the Web User Interface of Snow License Manager.

3.1 LOGIN

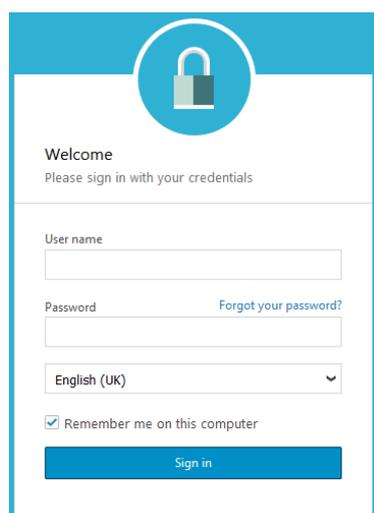
Type user name and password, and click **Sign in** or press **Enter**.

3.1.1 MORE OPTIONS

Select the **Remember me on this computer** check box to more easily log on to the SLM Web UI. Login credentials are encrypted and saved in a cookie on the computer.

Select language from the **Language** list to store the setting in the user profile. The selected language will apply by default.

Click **Forgot your password**, type your email address, and then click **Send** to request a new password.




Welcome
 Please sign in with your credentials

User name

Password [Forgot your password?](#)

English (UK) ▾

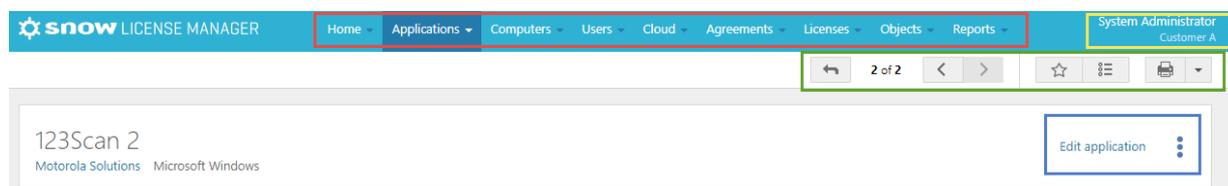
Remember me on this computer

3.2 THE USER INTERFACE

There are four major types of navigation in the SLM Web UI (indicated by colored lines in the following screenshot):

- **Category navigation** (in red)
Is used to select category and the available menu items for the selected category.
- **Administration menu** (in yellow)
Is used to select administration menu items.
- **Tool bar** (in green)
Is specific for the current page and is used to select commands for the specific page.
- **Context menu** (in blue)

Is specific for the current page and is used to select commands for the specific page. Click the **Menu** icon to show more options.



3.2.1 TOOL BAR

The tool bar is specific for the current page.

3.2.1.1 NAVIGATION BUTTONS

Click the navigation buttons on the tool bar to navigate between different detail views.

Navigation button	Description
	Go back to the list view
	Go to the previous detail view
	Go to the next detail view

3.2.1.2 FAVORITES

Save your most frequently used views as favorites, such as lists, detail views, or reports, and access them with one click.

On the tool bar, click the button to view the **Favorites list**.

To add a page to your navigation favorites:

1. Navigate to the view.
2. On the tool bar, click the button.
3. Use the proposed name or type a new.
4. Click **Save**.

To remove a favorite:

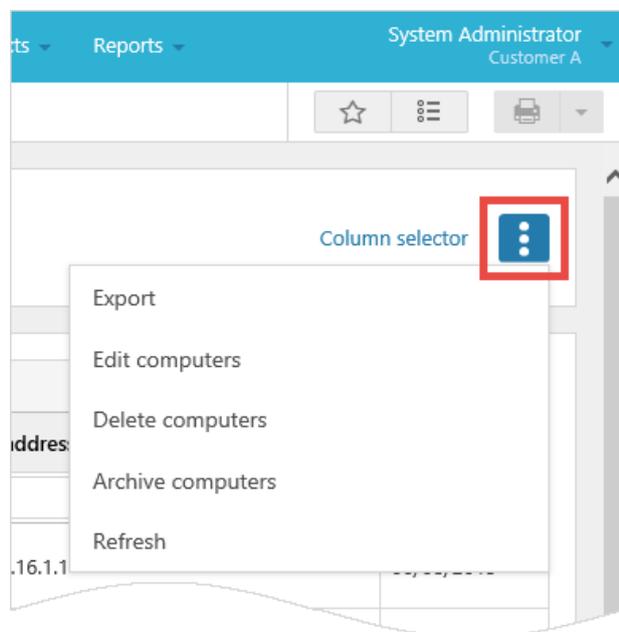
1. On the tool bar, click the button, and then click the favorite to be removed.
2. On the tool bar, click the button, and then click **Remove favorite**.

3.2.1.3 PRINT

Click the **Print this page** button to print information from the current view via the standard print dialog. If a detail view contains more than one tab, only information on the selected tab will be printed. To print information from more than one tab, click the **Print selection** button and select what to include.

3.2.2 CONTEXT MENU

The context menu is specific for the current page. However, some commands are the same and these commands are listed in the following table. For category specific commands, refer to the corresponding category section.



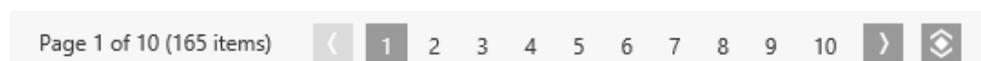
Commands that are the same for several context menus.

Table 1. Commands that are the same for several context menus.

Option	Description
Column selector	Add/remove columns to the list. For more information, see Column selector .
Export	Export the current list or search result to a file in one of the following formats: <ul style="list-style-type: none"> ▪ CSV (Comma separated text) ▪ PDF (Portable Document Format) ▪ XLS/XLSX (Microsoft Excel) ▪ XML (Extensible Markup Language) The exported file will be available as a downloaded file in the web browser.
Refresh	Reload/renew the contents of the page.

3.2.3 NAVIGATION

Click the navigation buttons at the bottom of the page to navigate between list and search result pages:



Navigation button	Description
	Go to previous page
	Go to next page
	Indicates current page number
	Click to show all items (no paging)
	Go to the page indicated by the number

3.2.4 ICONS

The following generic icons may appear in the category views. For category specific icons, refer to the corresponding category section.

Generic icon	Description
	Download a report
	Edit the item
	Expand/show more information
	Collapse/show less information
	Search for an item
	Remove the item
	Remove the item

3.2.5 REMARKS

In category tabs with a **Remark** column, the following remarks may appear:

Remark	Title	Description
A	Virtual application	This is a virtual application.
B	Installation included in software bundle	This application is installed via a software bundle.
C	License assigned to this computer	This installation is covered by a license assigned to this computer.
D	Covered by license for datacenter/cluster	This installation is covered by a named datacenter and cluster license.
E	Covered by extended coverage	This installation is covered by a license with extended coverage.
EXC	Excluded from compliance calculations	This installation is manually excluded from compliance calculations.

Remark	Title	Description
G	Granted user	This installation is covered by a license assigned to the user. The remark is used when an application is licensed with the metric Installation and the assignment type User , and a license is assigned to a user.
M	Deducted simultaneous versions	This installation is covered by a license with multiple version/edition use rights.
N	Covered by license for named user	This installation is covered by a named user license. The remark is used when an application is licensed with the metric User and the assignment type User , and a license is assigned specifically to a named user.
O	Outside metric criteria	The usage of this application is outside the metering period.
S	Coverage by site license	This installation is covered by a site license.
U	Covered by secondary use rights	This installation is covered by a license with secondary use rights.
UB	Individual licensing of included programs	Applications have previously been installed via software bundle but can now be licensed individually. See Bundle options for more information.
V	Virtual machine on licensed physical server	This installation is covered by a license with VM use rights.
VDI	Part of Virtual Desktop Infrastructure	This installation is covered within a VDI infrastructure.
W	Web application	This application is a web application.

3.2.6 INFORMATION TYPES

The following information types are used in the **Information** tabs:

Information icon	Title	Description
	Information	Used for general information.
	Custom fields	Used for custom field information
	Inventory	Used for information supplied by Snow Inventory
	Agreement	Used for agreements.

3.2.7 ALERTS

The **Alert list** shows all alerts for all categories, while the **Category** overviews show all alerts related to the selected category. Click an alert text to show detailed information. Some of the alerts require attention from the user.

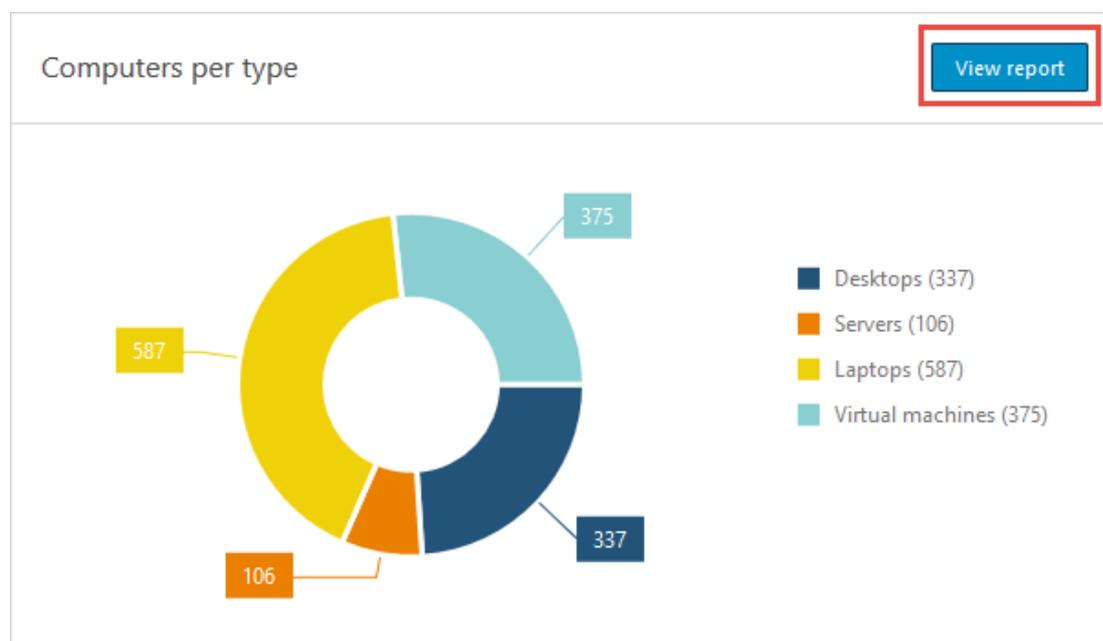
Alert icon	Name	Description
	Critical Level	Requires immediate attention.
	Warning	Can be left without taking further steps, but will require attention at some point.
	OK	No attention needed (information only).
	Information	Shows information not related to an alert, such as system information.

Alerts of the same type are grouped. Click the arrow to the left to collapse or expand the group.

A notification card with a red 'X' icon on the left. To its right is a collapse arrow icon (a square with a downward arrow) and the text "7 agreements have expired". Below this, two lines of text list expired agreements: "The agreement [Adobe CLP 5.0 2010-2012] has expired" and "The agreement [Adobe CLP 4.5 2008-2010] has expired".

3.2.8 PIE CHARTS

The **Start** and **Category** overviews show pie charts that provide a quick overview.



Click **View report** to view the report that the pie chart is based on.

To modify the report that the pie chart is based on:

1. Click **View report**.
2. In the report view, modify the search criteria, and then click **Set default**.

For more information, see [Change report criteria](#). To indicate that a pie chart has been modified, **[Filtered]** is displayed after the name of the chart.

3.3 MANAGE LISTS

Lists are easy ways to manage and search for information in the everyday use of the SLM Web UI. There are three different types of lists;

List type	Description
List all	This type of list is available for applications, computers, devices, mobile devices, users, agreements, and licenses . It generates a list containing all rows with selected information within the specific category. You can then sort and filter the information further.
Search	All search results are displayed using lists. The difference compared to List all is that the content can be pre-filtered and searches can be saved for later use.
Reports	For more advanced reporting purposes pre-configured stock reports are available in the Report section. These reports can be filtered and scheduled for automatic delivery.

In lists, all rows are clickable and lead to the detail view of the selected computer, user, etc. When you return to the list, it will appear the same way as you left it, with any grouping and/or filtering applied.

All lists use paging by default, and they are cache-enabled which stores the initially loaded data. To reload/renew list contents, select **Refresh** on the context menu.

3.3.1 FILTERING

List contents can be modified directly using filters:

- Type the filter criterion in the box below the column header (no wildcard character is required) and wait a second while the list is reloaded. Only rows that match the filter are displayed.

Drag a column header here to group by that column

<input type="checkbox"/>	Application name	Manufacturer	Installations	Users	License required
		adobe			
<input type="checkbox"/>	ExtendScript Toolkit CS6	Adobe Systems Inc.	10	0	<input type="checkbox"/>
<input type="checkbox"/>	ExtendScript Toolkit CS5.5	Adobe Systems Inc.	4	0	<input type="checkbox"/>
<input type="checkbox"/>		Adobe Systems Inc.	2	0	<input type="checkbox"/>

3.3.2 SORTING

The list is by default sorted based on the first column, but can be sorted by another column.

- To sort the list by another column than the first column, click the column header.
- To reverse the sorting order, click the same column header once again.

A selected sort order is indicated by an arrow in the column header.

Drag a column header here to group by that column

<input type="checkbox"/>	Application name	Manufacturer	Installations	<input type="checkbox"/>	Users	License required
<input type="checkbox"/>	Microsoft Visual C++ 2008 Redistributable	Microsoft Corporation	832	0	<input type="checkbox"/>	
<input type="checkbox"/>	Microsoft Silverlight 5.1	Microsoft Corporation	635	0	<input type="checkbox"/>	
<input type="checkbox"/>	Microsoft Office 365 ProPlus	Microsoft Corporation	580	0	<input type="checkbox"/>	

3.3.3 GROUPING

To group list contents:

- Drag column headers to the grouping area above the list. The list contents can be grouped in several levels, by dragging two or more column headers to the grouping area.

Details of the group are hidden by default. To expand the group, click the arrow to the left.

<input type="checkbox"/>	Application name	Installations	Users	License required
<input type="checkbox"/>	Microsoft Office 365 ProPlus	133	130	<input checked="" type="checkbox"/>

Bundle: Unchecked
 Bundle: Checked

- Metric: Based on concurrent users
- Metric: Based on installations
- Metric: Based on total processor cores
- Metric: Based on total...

3.3.4 COLUMN SELECTOR

Use the **Column selector** function to add columns that are not displayed by default, or to remove unnecessary columns.

1. On the context menu, click **Column selector**.
The **Select columns** dialog box appears.
2. To add a column to the list, drag and drop the column to the list header.
3. To remove a header from the list, drag it back and drop it in the **Select columns** dialog box.
4. To close the **Column selector** dialog box, click **X** in the top right corner.

Drag a column header here to group by that column

<input type="checkbox"/> Application name	Whitelisted	Metric	Installations	Users
		No license required	832	0
		No license required	635	0
		No license required	580	0
			572	

3.3.5 SELECT ALL ITEMS

If the **Select all** check box at the top of a list is selected, only the items visible on the current page are selected.

Drag a column header here to group by that column

<input checked="" type="checkbox"/> Application name	Metric	Installations
adobe		
<input checked="" type="checkbox"/> Adobe Acrobat 3D 8	Based on installations	0
<input checked="" type="checkbox"/> Adobe Acrobat 4	Based on installations	0
	Based on installations	

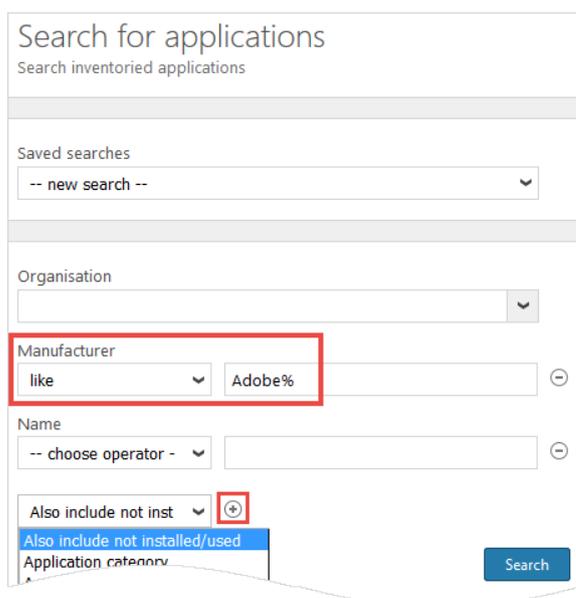
To select all items in a list with multiple pages, click the **Show all pages**  icon and then select the **Select all** check box.

3.4 SEARCH

The search functionality is based on the standard lists, but has filtering applied from start. Searches do not include all available columns within the specific category by default.

To start a search:

1. Select type of operator and type the search string. Use % as a wildcard character.
2. To add a new search criterion, select type from the bottom list and click . Selected type is added to the list above.
3. Click **Search**.
Search is not activated until valid search strings and conditions have been entered.



Search for applications
Search inventoried applications

Saved searches
-- new search --

Organisation

Manufacturer
like Adobe%

Name
-- choose operator -

Also include not installed/used

Application category

Search

3.4.1 SAVE SEARCHES

Filters and groupings that have been made in a search, regardless of category, can be saved for easy access and reuse later on. Searches are saved per user.

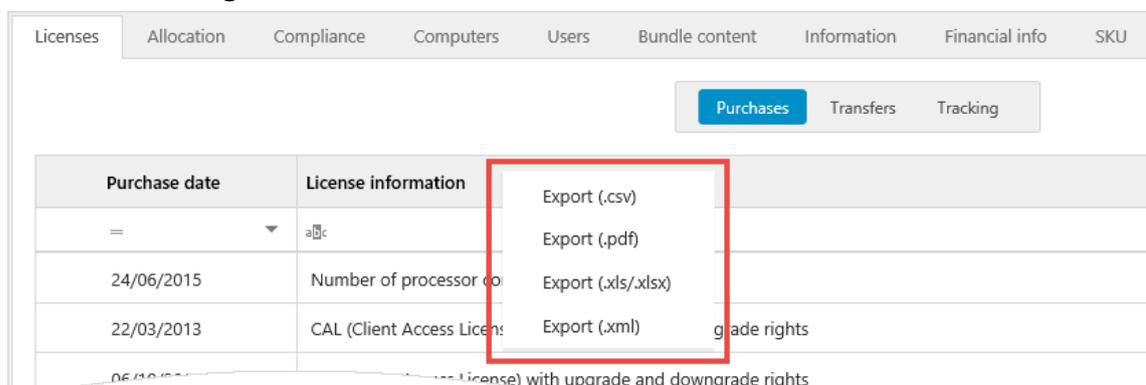
- Select **Save search** from the context menu and type a name for the search.

Searches that have been saved can be selected from the **Saved searches** list. When a saved search is used, it will be applied on the current information in the database.

3.5 EXPORT

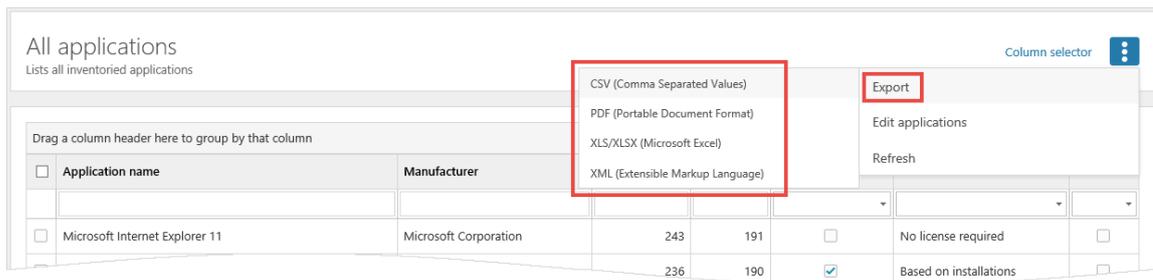
Snow License Manager offers several export capabilities. Lists can be exported to the formats CSV, PDF, XLS/XLSX, XML. To export a list:

- In a detail view, right-click a list on a detail tab, and then click format.



Purchase date	License information
=	a
24/06/2015	Number of processor co
22/03/2013	CAL (Client Access Licens
06/10/2013	License) with upgrade and downgrade rights

- On the context menu of a list view or a search result, point to **Export**, and then click format.



The exported file will be available as a downloaded file in the web browser.

For more information on reports and how to export reports to a file, see [Manage reports](#).

3.6 CATEGORY VIEWS

The information in Snow License Manager is sorted in categories, for example in **Applications**, **Computers** and **Users**.

- Use **Category overview** to show a quick summary of the category displayed in pie charts, and to find alerts related to the category.
- Use **Search for** to find a specific category item.
- Use **List all** to navigate through all the category items.

This chapter gives an overview of the information found in the category detail views and how to edit and delete category items.

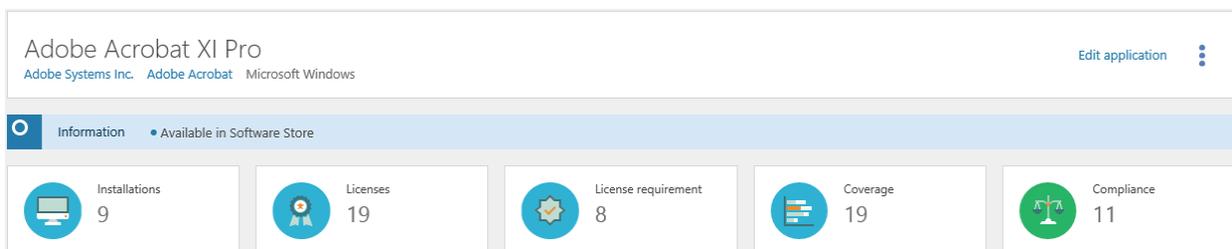
3.6.1 DETAIL VIEWS

To show detailed information on a specific item:

- Click the item in a list of category items.

Note that the detail views are different depending on category.

The **top section** of the detail view contains general information on the category item, messages and a summary in information boxes. Some information is clickable and links to other views. In the following figure, there are links to the manufacturer (Adobe Systems Inc.) and to the application family (Adobe Acrobat).



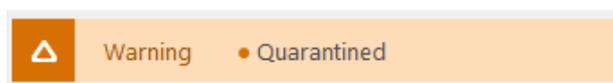
The **bottom section** of the detail view shows detailed information organized in tabs and tables.

Purchase date	License information	Assignment type	Quantity	Incomplete
=	#			= (All)
30/10/2014	Not set	Organisation	4	<input checked="" type="checkbox"/>
30/10/2014		Organisation	0	<input checked="" type="checkbox"/>

3.6.1.1 MESSAGES

Messages are only displayed when there are messages. The message types are:

- Information
- Warning
- Critical



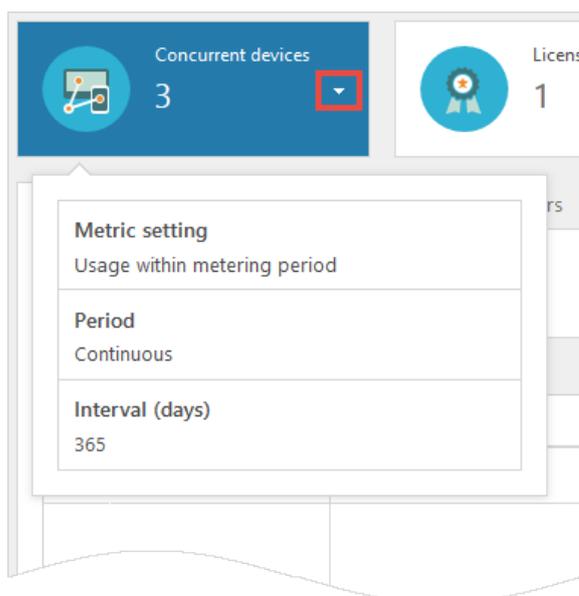
3.6.1.2 INFORMATION BOXES

Depending on the category, the summary in the information boxes shows for example:

- Licensing information for an application.
- The number of installed applications on a computer.
- The number of applications a user is utilizing.

A blue arrow in the information box indicates that there is more information related to the data.

- Click the information box to show more information.



3.6.2 MANAGE CATEGORY ITEMS

This section describes how to edit and delete category items.

3.6.2.1 EDIT CATEGORY ITEMS

Category items can be edited in two ways.

EDIT SINGLE CATEGORY ITEMS

1. Navigate to the category item.
2. On the context menu, click **Edit** <category item>.
3. Edit the details for the category item.
4. Click **Save**.

EDIT MULTIPLE CATEGORY ITEMS

Some category items allow for multiple editing as described in the following instruction. Note that the instruction can also be used to edit single items.

1. On the **Category** menu, click **List all** <category items> or **Search for** <category items> and find the category items to be edited.
2. Click the check boxes to the left to select the category items.
3. On the context menu, click **Edit** <category items>.
4. Edit the details for the selected category items.
All changes will apply to all selected category items. Fields left unchanged will keep their original content.
5. Click **Save**.

3.6.2.2 DELETE CATEGORY ITEMS

When a category item is deleted, the item is removed from the system and all associated details are deleted. All attachments to other category items are released.

NOTE

A deleted category item cannot be restored.

Category items can be deleted in two ways.

EDIT MULTIPLE CATEGORY ITEMS

1. Navigate to the category item.
2. On the context menu, click **Edit** <category item>.
3. Click **Delete**, and then confirm the deletion.

DELETE MULTIPLE CATEGORY ITEMS

Some category items allow for multiple deletion as described in the following instruction. Note that the instruction can also be used to delete single items.

1. On the **Category** menu, click **List all** <category items> or **Search for** <category items> and find the category items to be deleted.
2. Click the check boxes to the left to select the category items.
3. On the context menu, click **Delete** <category items> and then confirm the deletion.

3.7 MANAGE DOCUMENTS AND LINKS

For all categories, documents and links related to the category can be uploaded. Note that document file size must be less than 500 MB. Uploaded documents and links are displayed on the *Documents* tab of the detail views.

Documents and links can be added or removed in the edit views:

1. Navigate to the edit detail view of a category item.
2. On the **Documents** tab, click **Add document**.
3. Select to **Upload** a document or add a **Link**.
4. Click **Browse** to select the file, or type the **Link**.
5. Type a **Title** and a **Description** for the document (or link).
6. Click **Save**.
The document (or link) is added to the list.
7. Click the icons to show , edit , or remove  the document or link.

3.8 DATA UPDATE JOB

Data Update Job is a daily recurring Microsoft SQL Server batch job that is used for transferring, transforming, and normalizing new and updated Snow Inventory data to Snow License Manager. By default, Data Update Job starts at 09:00 PM.

Snow License Manager 9.1 and later versions allow users to sign in at all times, regardless of whether Data Update Job is running or not.

While Data Update Job runs, users are able to access and work with inventory assets, for example, computers and users. If a specific page or area is momentarily being processed by Data Update Job, it will temporarily be unavailable. Users who try to access such a page or area will see a page informing them that their data is temporarily unavailable.

The main reason for restricting access to a page or area is to prevent inconsistent data from being presented and to prevent users from making critical business decisions based on incomplete data.

Data Update Job keeps track of what is being processed, and will both lock and unlock areas of Snow License Manager when they are unavailable and available, respectively. When Data Update Job runs, reports can be the most locked-down part of Snow License Manager due to the fact that report data is often collated from many different parts of Snow License Manager.

NOTE

A user account with adequate permissions to access Snow Management and Configuration Console can change the time when Data Update Job automatically runs. For more information on this, go to [User Guide: Snow Management and Configuration Center for Snow License Manager 9](#).

4 ADMINISTRATIVE TASKS

The following chapter describes how to customize the Web User Interface of Snow License Manager and how to perform administrative tasks.

When logging in to Snow License Manager, the main start page shows one of the following:

- An **Alert list** (named Overview)
- A **Snowboard**

The preferred start page is selected in **Settings**, see [User settings](#)

4.1 ALERT LIST

The **Alert list** shows a summarized list of active alerts for all categories, and pie charts for **Inventory status** and **Compliance**.

By default, all active alerts are displayed in the view.

- To narrow down the alert categories, click **Filter** in the top right corner and then click to select the categories.

4.2 SNOWBOARD

The **Snowboard** shows a quick overview of status and alerts. The overview is provided using widgets, that is, small objects with tools and content of various nature. There are two types of Snowboards:

- The **Default Snowboard** is accessible to all users. It can neither be edited nor deleted.
- A **customized Snowboard** is only accessible to the user who created it. A user can create several Snowboards, and switch between them on the **Snowboard** menu.

By default, all Snowboards are presented in view mode. To be able to change the appearance or content of a Snowboard, it must be set in edit mode which is done on the **Snowboard** menu.

4.2.1 CREATE A NEW SNOWBOARD

A new Snowboard can be created either from scratch or by using an existing Snowboard as basis.

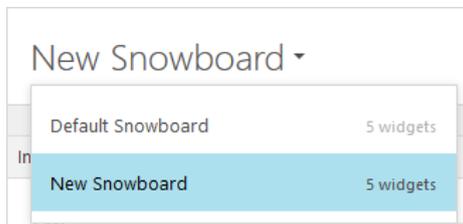
1. On the context menu, click **Create Snowboard**.
The **Create Snowboard** dialog box appears.
2. Type a name for the new Snowboard.
3. To use another Snowboard as basis, select the **Copy from an existing Snowboard** check box and select the Snowboard from the **Select Snowboard** list.
4. Click **Save**.
The new Snowboard is created.

When the Snowboard is created from scratch, an empty Snowboard will be displayed. However, if an existing is used as basis, the new Snowboard will be populated with the widgets of that selected Snowboard.

4.2.2 EDIT A SNOWBOARD

To add, move, resize, edit or remove widgets, the Snowboard must be set in edit mode:

1. On the **Snowboard** menu, click the Snowboard to be edited.



2. On the context menu, click **Edit current Snowboard**.
The **Snowboard** is set to edit mode.

NOTE

If navigating to another page in Snow License Manager while the Snowboard is in edit mode, the Snowboard will return to view mode, and changes made to the Snowboard will not be saved.

4.2.2.1 ADD WIDGETS

1. Click **Add widget**.
The **Add widget** dialog box appears.
2. In the **Type** step, click to select a widget type.
3. In the **Widget** step, click to select a widget.
4. In the **Settings** step:
 - a. Optionally configure the selected widget. Available properties depend on the selected widget type. The content of the widget will be adjusted to the selected **Size**.
 - b. Optionally type a **filter criterion** to filter the data the widget is based on. Use % as a wildcard character.

NOTE

Widget settings can be changed later on, as well.

5. To return to a previous tab, click **Type** or **Widget**.
6. To add the selected widget, click **Add widget to Snowboard**. The widget is added to the Snowboard.
7. Repeat the steps to add more widgets.
8. Click **Save** to save the changes and return to view mode.

4.2.2.2 MOVE WIDGETS

To move a widget within a **Snowboard**:

1. Drag the widget to the new place.
2. Click **Save** to save the changes and return to view mode.

4.2.2.3 RESIZE WIDGETS

1. Point to the icon in the top left corner of the widget , and then select a new size.
2. Click **Save** to save the changes and return to view mode.

4.2.2.4 EDIT WIDGET

1. Point to the icon in the top left corner of the widget , and then click **Edit widget**. The **Edit widget** dialog box appears.
2. Configure the settings.
3. Click **Apply changes**.
4. Click **Save** to save the changes and return to view mode.

4.2.2.5 REMOVE WIDGETS

1. Point to the icon in the top left corner of the widget , and then click **Remove widget**.
2. Click **Save** to save the changes and return to view mode.

4.2.3 VIEW DATA

To show the data the widget is based on, click **View data**.

If the data is filtered, then the filter criterion is shown above the list of data:

- If a wildcard was used when filtering the data, that is, the data *contains* the filter criterion, the symbol  is shown together with the filter criterion.
- If no wildcard was used when filtering the data, that is, the data is *equal to* the filter criterion, the symbol  is shown together with the filter criterion.

4.2.4 DELETE A SNOWBOARD

To delete a Snowboard, the Snowboard must be set in edit mode.

1. On the **Snowboard** menu, click the Snowboard to be deleted.
2. On the context menu, click **Edit current Snowboard**. The **Snowboard** is set to edit mode.
3. Click **Delete Snowboard**, and then confirm the deletion.

4.3 ADMINISTRATION OVERVIEW

The **Administration** overview on the **Home** menu gives access to a number of administrative tasks, which can be performed directly in the SLM Web UI. The administrative tasks are described in the following sections.

4.3.1 CLEAR TEMPORARY CACHE MEMORY

All reports, lists, alerts, detail views, and graphs are stored in a temporary cache memory.

To clear the cache memory:

- In the **Administration** overview and on the context menu, click **Clear temporary cache memory**.

Information that has been registered and saved will neither be removed nor changed.

4.3.2 ACTION LOG

The **Action log** view shows information on changes in the system, for example added or removed licenses, deleted items, or other critical changes.

4.3.3 APPLICATION BLACKLIST

Applications that are not approved for installation and usage in the IT environment can be specified in the **Application blacklist** view. Unwanted software, for example game and poker applications, can be monitored with the blacklist functionality.

The **Application blacklist** view consists of two tabs according to the following table.

Tab	Description
Criteria	Used for specifying criteria that result in a blacklist of unwanted applications. A blacklist criteria applies to an application name or an application type.
Applications (result)	Displays all applications affected by the blacklist criteria.

Unwanted applications are automatically identified based on added criteria (application name or application type). Also, applications can be manually added to the blacklist.

Installation or usage of a blacklisted application will result in an alert. Blacklisted applications are also displayed with red background in the **Computer details** and **User details** views.

To list all applications that have been blacklisted:

- Use the stock report **All applications**, and add the report criteria **Blacklisted**.
- In the view **List all applications**, add the column **Blacklisted** (Yes/No) from the Column selector to facilitate filtering.
- Use the stock reports **Blacklisted applications per computer** or **Blacklisted applications per user**.

4.3.3.1 ADD OR EDIT BLACKLIST CRITERIA

1. On the **Criteria** tab, perform one of the following:
 - To add a blacklist criteria, click **Add criteria**. The **Add criteria** dialog box appears.
 - To edit a blacklist criteria, click the criteria row. The **Edit criteria** dialog box appears.
2. Select **Criteria type** from the list.
3. Type the **Criteria**. Use % as a wildcard character to include several applications with common names or types.

- Example: %poker%

4. Click **Save**.

4.3.3.2 DELETE BLACKLIST CRITERIA

1. On the **Criteria** tab, and on the criteria row, click the **Delete**  icon. The **Delete criteria** dialog box appears.
2. Click **OK** to confirm.

4.3.3.3 VIEW BLACKLIST APPLICATIONS

All applications that are affected by the blacklist criteria are displayed on the **Applications (result)** tab, regardless if they are installed in the current IT environment or not. The columns **Installations** and **Users** show the number of installations and users in the current IT environment.

4.3.4 APPLICATION WHITELIST

Applications that are approved for installation and usage in the IT environment can be specified in the **Application whitelist** view.

The **Application whitelist** view consists of two tabs according to the following table.

Tab	Description
Criteria	Used for specifying criteria and automation rules that result in a whitelist of approved applications. A whitelist criteria applies to an application name, application type, or application manufacturer.
Applications (result)	Displays all applications that are affected by the whitelist criteria.

Approved applications are automatically identified based on added criteria. Also, applications can be manually added to the whitelist.

Installation or usage of an application which is not on the whitelist will result in an alert. Non-approved applications are also displayed with grey background in the **Computer details** and **User details** views.

To list all applications that have been whitelisted:

- Use the stock report **All applications**, and add the report criteria **Whitelisted**.
- In the **List all applications** view, add the column **Whitelisted** (Yes/No) from the Column selector to facilitate filtering.

NOTE

Blacklist overrides whitelist. If an approved application is blacklisted, it will be removed from the whitelist.

4.3.4.1 ADD OR EDIT WHITELIST CRITERIA

1. On the **Criteria tab** tab, perform one of the following:

- To add a whitelist criteria, click **Add criteria**.
The **Add criteria** dialog box appears.
 - To edit a whitelist criteria, click the whitelist criteria row.
The **Edit criteria** tab appears.
2. Select **Criteria type** from the list.
 3. Type the **Criteria**. Use % as a wildcard character to include several applications with common names or types.
 - Example: %ftp%
 4. Click **Save**.

4.3.4.2 DELETE WHITELIST CRITERIA

1. On the **Criteria** tab, and on the criteria row, click the **Delete**  icon.
The **Delete criteria** dialog box appears.
2. Click **OK** to confirm.

4.3.4.3 SET WHITELIST AUTOMATION RULES

1. On the **Criteria** tab, and in the **Whitelist automation rules** section, click **Edit**.
2. To set a rule, select the check box of the rule.
If needed, change the quantities in the **installations** and **users** boxes.
3. To apply the whitelist automation rules, click **Apply rules**.

4.3.4.4 VIEW WHITELIST OF APPROVED APPLICATIONS

All applications that are affected by the whitelist criteria are displayed on the **Applications (result)** tab, regardless if they are installed in the current IT environment or not. The columns **Installations** and **Users** show the number of installations and users in the current IT environment.

4.3.5 COMPLIANCE EXCLUSIONS

While many license requirements include all available applications to be included in the compliance calculation, there are instances where applications should be excluded from computers for compliance calculations. For example, one rule could state that if Windows Server is installed on a host, and its only enabled role is Hyper-V, the host is not required to be counted for compliance purposes.

The **Compliance exclusions** feature is introduced with Snow License Manager 9. Use the **Compliance exclusions** view to create rules for applications that will be excluded from compliance, for selected computers.

The **Compliance exclusions** view consists of two tabs according to the following table.

Tab	Description
Rules	The name of the rules
Results	The results of executing the existing and active rules; all applications and computers that are hit by the rules are displayed here

4.3.5.1 ADD OR EDIT COMPLIANCE EXCEPTION RULE

To add a compliance exclusion rule, select **Add exclusion**.

To edit a compliance exclusion rule, select the rule that you want to edit from the **Rules** tab.

The **Add or edit exclusion** view consists of three tabs according to the following table.

Tab	Description
Exclusion details	Define a rule name, the reason for the exclusion, and choose whether to activate the exclusion
Select applications	Select one or multiple applications to exclude
Select computers	Select one or multiple computers for which applications will be excluded

NOTE

In the **Select computers** view, you can use the **Display only computers with installations** check box. This will only display computers that have the selected applications installed.

4.3.5.2 INCOMPLETE RULE

When a compliance exclusion rule is created without either selecting applications or computers, it will be marked as incomplete.

Incomplete compliance exclusion rules can be saved, and will not affect compliance calculations as they will not be saved as active.

4.3.6 COMPUTER STANDARDS

Snow License Manager can be used as a tool for budget calculations of computer hardware. In the **Computer standards** view, minimum requirements and the price for hardware components can be defined.

The **Computer standards** view consists of two tabs according to the following table.

Tab	Description
Computer standards	Define minimum requirements for the computer standards.
Price information	<p>Define price for hardware components related to a specific manufacturer and/or computer model.</p> <p>Define standard prices for hardware components of computers that are not specified in the Price information tab.</p>

The report **Substandard computers** is based on the information entered in the **Computer standards** detail view and includes the computers that do not meet the defined minimum requirements.

- In the **Price information** column you can see if the hardware component costs for the computer are based on what you have entered in the **Price information** tab. If the box is blank, standard prices are used instead, as specified in the **Standard price** tab.

- **Upgrade cost** is the cost to complement the hardware components of the computer to meet the minimum requirements. The cost is based on the difference between the minimum requirements and the current hardware components of the computer.
- **Replacement cost** is the cost to replace the hardware components of the computer with new hardware components according to minimum requirements.

4.3.6.1 ADD OR EDIT COMPUTER STANDARD

1. On the **Computer standards** tab, perform one of the following:
 - To add a computer standard, click **Add computer standard**. The **Add computer standard** dialog box appears.
 - To edit a computer standard, click the computer standard row. The **Edit computer standard** dialog box appears.
2. Type a **Name** for the new computer standard.
3. Type minimum requirements for the hardware components in the **Processor speed**, **Memory**, and **Total disk space** boxes.
4. Click **Save**.

As an alternative, an existing computer can be used as basis when creating a new computer standard:

1. Navigate to the selected computer.
2. On the context menu, click **Use as computer standard**.
3. Type a **Name** for the new computer standard.
4. **Processor speed**, **Memory**, and **Total disk space** requirements will be set automatically based on the selected computer, but the values may be changed.
5. Click **Save**.

4.3.6.2 DELETE COMPUTER STANDARD

1. On the computer standard row, click the **Delete**  icon. The **Delete computer standard** dialog box appears.
2. Click **OK** to confirm.

4.3.6.3 ADD OR EDIT PRICE INFORMATION

1. On the **Price Information** tab, perform one of the following:
 - To add price information, click **Add price information**. The **Add price information** dialog box appears.
 - To edit price information, click the price information row. The **Add price information** dialog box appears.
2. Type **Manufacturer** and computer **Model** names. Use % as a wildcard character.
3. Select currency and type replacement costs for **Processor**, **Memory**, and **Disk space**.
4. Click **Save**.

4.3.6.4 DELETE PRICE INFORMATION

1. On the **Price information** tab, and on the price information row, click the **Delete**  icon. The **Delete price information** dialog box appears.
2. Click **OK** to confirm.

4.3.6.5 EDIT STANDARD PRICE

1. On the **Price information** tab, and in the **Standard price** section, click **Edit**.
2. Type standard replacement costs for **Processor**, **Memory**, and **Disk space** and select currencies.
3. Click **Save**.

4.3.7 CUSTOM COMPARE VALUE TYPES

A custom compare value type is a customized metric intended for licenses where the pre-defined metrics in Snow License Manager are not applicable. Custom compare value types are used to solve complex situations when data needs to come from other sources than Snow Inventory agents. The custom compare value type is available for the metric **Custom compare values** for applications.

4.3.7.1 ADD OR EDIT CUSTOM COMPARE VALUE TYPE

1. Perform one of the following:
 - To add a custom compare value type, click **Add**. The **Add custom compare value type** dialog box appears.
 - To edit a custom compare value type, click the custom compare value type row. The **Edit custom compare value type** dialog box appears.
2. In the **Name** box, type a name for the custom compare value type.
3. In the **Description** box, optionally type a name for the custom compare value type.
4. To use the custom field value as basis for compliance calculations, select the **Use a custom field value for compliance** check box, and then select a custom field from the list.
5. Click **Save**.

4.3.7.2 DELETE CUSTOM COMPARE VALUE TYPE

1. On the custom compare value type row, click the **Delete**  icon. The **Delete custom compare value type** dialog box appears.
2. Click **OK** to confirm.

4.3.8 CUSTOM FIELDS

Custom fields are used for information or data that needs to be managed, but does not have a pre-defined entry in Snow License Manager. An unlimited number of custom fields can be created for the agreement, application, computer/mobile device, license, and user categories.

A custom field can be **Mandatory**, and must in that case have a defined **Default value**. The default value will automatically be added to new items within the category, as well as existing

items without a value in the custom field. Information in a custom field of an existing item will not be overwritten. New items cannot be saved unless there is a value in all mandatory custom fields.

A list of all created custom fields is displayed in the **Custom fields** view.

4.3.8.1 ADD OR EDIT CUSTOM FIELD

1. Perform one of the following:
 - To add a custom field, click **Add custom field**.
The **Add custom field** dialog box appears.
 - To edit a custom field, click the custom field row.
The **Edit Custom field** dialog box appears.
2. In the **Name** box, type a name for the custom field.
The name will be displayed in the detail view of the computer/mobile device, license, and user categories. Choose a name so it will be easy to understand what kind of information is supposed to be entered.
3. In the **Category** list, select for which category this custom field should be available.
4. In the **Type** list, select type of content that can be entered in the field. The different types have built-in value validation.
5. In the **Description** box, optionally type a description for the custom field.
6. To create a list with pre-defined values for digit and text fields, type the value in the **Multi select** box and then click the **Add**  icon for each value.
7. To make the custom field mandatory for the selected category, select the **Mandatory** check box, and then type a default value in the **Default value** box.
8. Click **Save**.

4.3.8.2 DELETE CUSTOM FIELD

1. On the custom field row, click the **Delete**  icon.
The **Delete custom field** dialog box appears.
2. Click **OK** to confirm.

4.3.8.3 ENTER CUSTOM FIELD INFORMATION

The **Custom information** tab is part of the add/edit views of the categories and is used to enter information in custom fields.

To add a custom field and value:

1. In the **Custom fields** list, select the custom field to be added and then click **Add** or click **Add all** to add all available custom fields. The selected custom fields are added to the view.
2. Enter information in the **Value** box. Depending on selected custom field, values can be typed, or selected from lists or calendar views.

4.3.9 INVENTORY SOURCES

The **Inventory sources** view shows the inventory sources that are configured for your platform. The inventory sources are configured in **Snow Management and Configuration Center**. For

more information about inventory sources and how to configure the inventory sources, see the *User guide for Snow Management and Configuration Center*.

If the inventory sources are configured to gather data from more than one database or twice from the same database, then warning messages with instructions on how to solve the issues will be displayed.

4.3.10 LICENSE ASSIGNMENT TRACKING

If tracking is activated, the **License assignment tracking** view shows a log of license assignments. The view shows who assigned a license, when the assignment was made, and a comment on why the assignment was made. The assignments are given an identity in a consecutive order.

The tracking can be activated and deactivated on the **License assignment tracking** view:

- Click **Activate tracking** to log license assignments.
- Click **Deactivate tracking** to stop logging assignments.
The log of license assignments will remain but no new license assignments will be logged if the tracking is deactivated.

If a license is configured to be auto allocated, then this configuration will be logged, but the individual auto allocated assignments will not be logged.

If the tracking is activated, then the **Add assignment tracking** dialog box appears when a license has been assigned and saved. Review the information, make changes if needed, and then click **OK**.

4.3.11 LICENSE POLICY

The license registration process can be managed and adjusted in order to ensure correct license registrations. Fields can be made mandatory and lists with pre-defined options can be added, as well as descriptions that clearly state the intended purpose of a specific field.

The **License policy** view shows a list of all fields related to a license registration.

- To add a description, make the field mandatory, and/or add a multi-selection list, click the license policy row.

NOTE

Fields that are indicated as Required in the License policy must be entered during license registration. If the information is not entered, then the license cannot be saved, not even as incomplete.

4.3.12 MANUFACTURERS AND VENDORS

The **Manufacturer and vendors** view shows the contents of your manufacturer/vendor database. The information in the database can be used to facilitate the process of adding/editing agreements.

New manufacturers, vendors, and contractors are added to the database via the **Import data** wizard.

4.3.13 MY NOTIFICATIONS

My notifications are used for administration of alert and system event notifications.

NOTE

SMTP settings must be activated in Snow MACC to enable sending of e-mails.

4.3.13.1 ADD OR EDIT NOTIFICATION

1. Perform one of the following
 - To add a notification, click **Add notification**. The **Add notification** dialog box appears.
 - To edit a notification, click the notification row. The **Edit notification** dialog box appears.
2. On the **Details** tab:
 - a. To activate the notification, select the **Active** box. If left cleared, no notifications will be generated.
 - b. Type a **Name** for the notification.
 - c. In the **Send to** box, type the e-mail address of the recipients that the notification is intended for. Use comma as separator.
 - d. In the **Category** list, select the category that the notification applies to.
 - e. In the **When** list, select for which action a notification should be sent. Available options depend on the selected category.
3. Optionally, on the **Criteria** tab:
 - To make the notification more precise, add more criteria. Use multiple criteria and groups in order to create advanced filters. For each criteria, select an operator which tells the system how to compare the values. Use % as a wildcard character for values.
4. Click **Save**.

4.3.13.2 DELETE NOTIFICATION

1. On the notification row, click the **Delete**  icon. The **Delete notification** dialog box appears.
2. Click **OK** to confirm.

4.3.14 ORACLE COMPUTER MODEL MAPPING

An important criteria for determining Oracle licensing is the physical capacity of the server. One such detail is the number of processor sockets of the physical server, information that cannot be obtained by the inventory scan.

The **Oracle computer model mapping** view is used to manually specify the number of processor sockets for each unique computer model. The specified socket count value will be used as default for all servers of that model, but the value can be changed for a specific computer, if needed. The list includes all inventoried computer models with Oracle databases installed.

The Oracle Server Worksheet (OSW) requires information on the physical socket count and this report will be populated using the information supplied via the **Oracle computer model mapping**.

To specify the number of processor sockets of the physical server:

1. Click the computer model row.
The **Oracle computer model mapping** dialog box appears.
2. Type the physical socket capacity in the **Number of sockets** box.
3. Click **Save**.

4.3.15 WEB APPLICATIONS

It is possible to collect and measure usage of cloud/web based applications. Regardless of what type of binary being used (regular application, browser, etc.), the Snow web metering solution measures the HTTP/HTTPS traffic for the hosts that have been configured. The result is presented in Snow License Manager as regular applications, with most regular application features available.

Configuration of which cloud/web applications to monitor is done in the **Web applications** task.

When a web application is added and activated, software recognition rules are created automatically. This means that any usage of cloud/web applications that matches the entered patterns will be identified and presented in Snow License Manager.

4.3.15.1 ADD OR EDIT WEB APPLICATION

1. Perform one of the following:
 - To add a web application, click **Add web application**.
The **Add web application** dialog box appears.
 - To edit a web application, click the web application row.
The **Edit web application** dialog box appears.
2. Select **Client site name** and **Client configuration** from the lists.
3. Type the **Name** for the web application. This is the name that will be used by Snow License Manager.
4. In the **Patterns** box, type the domain name of the web application (no wildcard characters are allowed). Use domain names and not URLs. Several domain names can be entered, but only one per row.
 - Example: portal.microsoftonline.com
5. To activate the web application, select the **Active** check box. If left cleared, Snow License Manager will not measure usage of the web application.
6. Click **Save**.

NOTE

An added web application will only apply to a specified site and configuration. If several sites and configurations are to be measured, create one web application for each site and configuration combination.

4.3.15.2 DELETE WEB APPLICATION

1. On the web application row, click the **Delete**  icon.
The **Delete web application** dialog box appears.
2. Click **OK** to confirm,

4.4 ABOUT YOUR SLM AGREEMENT

To view details about your customer and license agreements for Snow License Manager:

- On the **Administration** menu, click **About**.

4.5 HELP AND SUPPORT

For information on Snow Software products, Frequently Asked Questions, and information on available training courses, visit www.snowsoftware.com.

To find manuals and other available system documentation:

- On the **Administration** menu, click **Help**.

4.5.1 SUPPORT REQUEST

To send a support request directly from SLM Web UI:

1. In the **Help** view, click **Support**. The **Support** dialog box appears. It is automatically populated with the available user information.
2. Enter your support request, and optionally attach files, and then click **Send**.

4.5.2 FEEDBACK

To give feedback on what you think of the system, or to provide Snow with your ideas on future functionality:

1. In the **Help** view, click **Feedback**.
The **Feedback** dialog box appears. It is automatically populated with the available user information.
2. Type your feedback, and then click **Send**.

4.6 USER SETTINGS

A user can change settings for its user account, for example language, currency, and alerts:

1. On the **Administration** menu, click **Settings**.
2. Change the settings according to the following sections, and then click **Save**.

4.6.1 CHANGE PASSWORD

- In the **Settings** view, click **Change password on the tool bar**.

The password must at least:

- Be eight characters long.
- Contain one uppercase letter (A-Z).
- Contain one lowercase letter (a-z).

- Contain one digit (0-9).
- Contain one symbol (! @ # \$ % ^ & ? =).

4.6.2 SETTINGS TAB

The **Settings** tab shows user interface and reporting/export settings.

Table 2. Settings for the **User interface**.

Setting	Description
Language	Select the preferred language from the list.
Default size for lists	Select Default for adjustment to a 1024 wide screen resolution. The Fullsize option is intended for users with higher resolution, where the lists are expanded to fit the entire screen, enabling the users to see more information.
Currency	Select the default currency in views and reports. The selected currency will be displayed as default for all financial values throughout SLM Web UI. Available currencies are defined in Snow MACC. Note that purchases can be registered in all available currencies, regardless of this setting.
Days to show updated remark on alerts	Select for how many days an alert will be indicated as updated in the alert lists.
Show start page as	Select the preferred start page; Snowboard or Alert list .
Auto select sub levels in organization selectors	Select this check box to automatically select sub-levels when selecting organization nodes in search and report criteria. This can be useful if you have several nodes with multiple sub-nodes and wish to filter content on a specific node including all of its sub-nodes. If this option is disabled, you will have to check each organization node manually, including sub-nodes, if you want to include them.
In computer and user details, show only applications that require a license	When selected, only applications that require a license will be displayed in the detail view for computers, mobile devices, and users. All other applications are hidden but will be available in lists, reports, and searches depending on how you choose to filter them.
Expand alert groups automatically	Alerts of the same type are grouped. Details of the alert group are hidden by default, but can be expanded by clicking an icon. Select this box to automatically expand alert group details.

Table 3. Settings for **Reporting and Exports**.

Setting	Description
Page orientation for PDF exports	Select page orientation for PDF exports from the list. If Default is selected, the export will use the pre-defined settings for each list. Note that list content is adapted to fit the page. Therefore, page orientation will affect font size of the content.

Setting	Description
Format handling for export to Excel from lists	<p>The Excel 2003 format contains a 65 000 row limit. Select Use format for Excel 2007/2010 (no row limit) to avoid the limitation. Files exported in the Excel 2007/2010 format cannot be opened in earlier versions of Excel.</p> <p>Native Microsoft Excel 2007 and 2010 formats (xlsx) are supported which radically decreases file size when exporting reports and lists.</p>

Table 4. Settings for **Imports**.

Setting	Description
Import	Type the Organization separator (delimiter) used in the import files between levels in the organization structure. For example, type "/" if the organization information is in the format: "ROOT/IT/Support".

4.6.3 ALERTS TAB

The **Alerts** tab shows all available alerts.

- Click the checkboxes to select alerts to be displayed in the category overviews.
- Click the **Alert** checkbox in the top left corner to select/deselect all alerts.

4.7 RECALCULATE COMPLIANCE

When conditions have changed, you have to manually recalculate compliance to immediately see the effects of the changes. Changed conditions can for example be when license purchases have been added, computers have been removed, or existing agreements have been changed.

To manually calculate compliance:

1. On the **Administration** menu, click **Recalculate compliance**.
2. Refresh the page.

5 APPLICATIONS

The **Applications** category gives complete information on all inventoried applications, such as:

- Application details
- Application manufacturers
- SAP utilization

Here, applications can be viewed and managed, and application usage can be monitored.

5.1 APPLICATION DETAIL VIEW

To show detailed information on a specific application, click the item in a list of applications.

The information boxes in the **Application** detail view show licensing information according to the following table.

Instances	Licenses	License requirement	Coverage	Compliance
Icon depends on type of instance				
Number of instances. The type of instance, depends on the metric used to calculate compliance for the application.	Number of available licenses.	Number of licenses required to ensure compliance with the selected metric.	Number of instances covered by available licenses	The calculated difference between Coverage and License requirement . Compliant: green icon Non-compliant: red icon

For an application that requires no license (the metric is set to “No license required”), only the information box **Installations** is used.

 Installations 27	 Licenses 0	 License requirement 0	 Coverage 0	 Compliance 0
---	---	--	--	---

The bottom section of the detail view contains detailed information on the application presented in tabs according to the following table.

NOTE

Available tabs in the application details view depend on the metric and if the application is installed on a computer or on a mobile device.

Tab	Description
Licenses	<p>PURCHASES All registered license purchases for the selected application.</p> <p>TRANSFERS All received or transferred licenses from/to other application versions via upgrade or downgrade rights.</p> <p>TRACKING A summary of license requirement and entitlement state for each consumer.</p> <p>For more information, see Licenses tab.</p>
Allocation	<p>Shows allocation of licenses and installations.</p> <ul style="list-style-type: none"> ▪ The License requirement column shows how many licenses are required for each organization node (i.e. number of licensable installations of the application in question) and includes installed applications without registered usage. ▪ The Coverage column shows the number of instances covered by available licenses. ▪ The Compliance column shows the calculated difference between Coverage and License requirement.
Compliance	<p>DETAILS A presentation of how the values displayed in the information boxes of the Application detail view have been calculated.</p> <p>HISTORY A graph of the highest and lowest compliance values each month over a period of time for the application. The period is selected with the range selector under the graph.</p> <p>TREND Graphs of the requirement, coverage, compliance and compliance trend of an application over a period of time. The period is selected with the range selector below the graph. Click the Requirement, Coverage, Compliance and/or Compliance trend labels to hide or show the graphs.</p> <p>For more information, see Compliance tab.</p>
Computers	<p>INSTALLATIONS All computers with an installation of the selected application.</p> <p>HISTORY A graph of the number of installations of the application per month over a period of time. The period is selected with the range selector below the graph.</p>
Mobile device	<p>All mobile devices with an installation of the selected application.</p> <p>Only available for mobile devices.</p>

Tab	Description
Users	<p>USERS All users that have used the application, and the last time they used it.</p> <p>CONCURRENT USAGE A graph of the maximum number of concurrent users per month over a period of time. The period is selected with the range selector below the graph. Only displayed for applications with metric Concurrent users.</p> <p>HISTORY A graph of the number of users of the application per month over a period of time. The period is selected with the range selector below the graph.</p>
Devices	<p>DEVICES The devices that have used the application. Available for applications that can be accessed remotely or via a virtual desktop connection.</p> <p>CONCURRENT USAGE A graph of the maximum number of concurrent devices per month over a period of time. The period is selected with the range selector below the graph. Only displayed for applications with metric Concurrent devices and if the application is installed on a device.</p> <p>HISTORY A graph of the number of devices using the application per month over a period of time. The period is selected with the range selector below the graph.</p>
Bundle content	<p>The names of all applications within the bundle. Also, the number of installations via bundles is compared to the total number of installations, and the difference constitutes the number of stand-alone installations. Only available for application bundles, such as Adobes Creative Suites or Microsoft Office.</p>
Information	<p>General information on the application grouped by information type.</p>
Financial info	<p>The financial information that has been entered for the application. All values are shown in the currency set by the user. For more information, see Financial info tab.</p>
SKU	<p>The Stock-keeping unit (SKU) information for the application.</p> <ul style="list-style-type: none"> ▪ The column Product description shows application details supplied by the manufacturer. ▪ The columns UPG and DWN show the product use rights; upgrade and downgrade.

5.1.1 LICENSES TAB

The **Licenses** tab contains the views **Purchases**, **Transfers**, and **Tracking**.

PURCHASES

The **Purchases** view shows information on all license purchases that have been registered for the application. The **Incomplete** check box is used for indication of any incomplete licenses.

Click the arrow  next to the purchase date to open a separate window presenting the current license allocation.

Click a purchase in the list to be directed to the details of that license registration.

TRANSFERS

If any licenses have been received or given via upgrade rights or downgrade rights, a list of these transfers can be found in the **Transfers** view. Information is shown on involved applications, transfer type, metric of the license, and number of transferred licenses.

Click an application in the list to be directed to the details of that application.

TRACKING

The **Tracking** view shows a list of all consumers that require a license for the application:

- The **Used** column indicates if the installation is used or not.
- The **Required** column shows the number of licenses that is required for coverage. Click the arrow next to the quantity to see information on any license adjustments that have been made to the initial license requirement.
- The **Entitlement state** column shows to what extent the consumer is covered. Click the arrow next to the state to see more information, and to be directed via a link to any license purchase that is used for coverage.

Click a consumer in the list to be directed to the details of that consumer.

5.1.2 COMPLIANCE TAB

The **Details** view on the **Compliance** tab shows in depth information on how licenses, requirement, and coverage on the **Application** detail view have been calculated.

The top section shows calculations based on the metric of the application. If any licenses have been registered with other metrics than the application's metric, additional sections with calculations will follow.

Tab	Description
Initial requirement	<p>The initial license requirement before any adjustments have been made. The number is expressed in the metric of the application or, for licenses with another metric, translated into the corresponding quantity of that metric.</p> <p>EXAMPLE</p> <p>The metric is set to Number of processors. There are 10 servers with in total 14 processors where this application is detected. The initial requirement will in this case be 14 processors. If a license purchase is registered with the metric Installations the initial requirement will correspond to 10 installations.</p> <p>For more information, refer to the Compliance examples in the Appendix.</p>

Tab	Description
Licenses	<p>Information on available licenses that can be used to cover this application.</p> <p>Number of registered purchased licenses are shown as well as any license adjustments that have been made, for example:</p> <ul style="list-style-type: none"> ▪ transfers of licenses via upgrade or downgrade rights (+/-) ▪ incomplete or unassigned licenses (-) ▪ subscription licenses for which the subscriptions have expired (-).
Required licenses	<p>Information on number of licenses that are required.</p> <p>Number of initially required licenses are shown as well as any license adjustments that have been made, for example:</p> <ul style="list-style-type: none"> ▪ extended coverage or secondary use rights (-) ▪ application bundling (-) ▪ usage outside the metering period (-) ▪ VDI (-) ▪ manual compliance exclusions (-) ▪ Core factors (+/-). <p>These details are only shown in the section for the metric of the application.</p>

Tab	Description
Coverage	<p>Information on to what extent the application is covered.</p> <p>Number of available licenses are shown as well as any license adjustments that have been made, for example:</p> <ul style="list-style-type: none"> ▪ covered by other metrics (+) ▪ licensing other metrics (-) ▪ site licenses (+) ▪ VM use rights (+) ▪ Covered by subscription plan (+) <p>NOTE To automatically detect license coverage of applications included in Microsoft Office 365, Snow License Manager users must be linked with Microsoft Office 365 users. Also, the Snow Integration Connector for Microsoft Office 365 must be setup.</p> <ul style="list-style-type: none"> ▪ Double licensed (-) <p>NOTE A double licensed application is an application that is both covered by a license and a subscription plan.</p> <p>The normal license auto allocation does not take into account which users have a subscription plan that is covering the application. This will result in both the normal license, and the subscription plan covering the same user.</p> <p>We recommend that you use the Snow Integration Connector for Microsoft Office 365 and user linking to provide coverage for applications included in your Microsoft Office 365 subscription plans. If you need to add coverage for an application using a normal license, make sure to assign it to the specific user or device you want covered, rather than using auto allocate.</p>
Compliance	<p>A summary that shows whether the application is compliant or not:</p> <p>Compliance = Coverage – Required licenses</p>

5.1.3 FINANCIAL INFO TAB

The **Financial info** tab shows costs and financial risks related to the application.

Type	Description
Total application cost	<p>This cost is calculated as:</p> <p>Application cost per <i>metric</i> × License requirement</p>

Type	Description
Application cost per <metric>	This cost is set manually in the Edit application view.
Total license cost	This cost is calculated as: Total license purchase + Total maintenance cost + Total support cost <ul style="list-style-type: none"> ▪ Total license purchase = sum of Purchase price for all licenses registered for the application ▪ Total maintenance cost and total support cost are based on all periods and for all licenses registered for the application.
Average cost per license (metric)	This cost is based on the metric of the application: Total license cost / Total number of licenses NOTE This cost is only calculated for license purchases with the same metric as the application.
Risk	Shows the compliance discrepancy in cost for the application. Risk can be negative or positive depending on if the compliance is negative or positive. The risk is calculated as: Average cost per license (metric) × Compliance If no licenses are purchased for the application or if the registered licenses have different metrics than the metric of the application, then the risk is calculated as: Application cost per metric × Compliance
Risk (unused software)	Shows the cost for unused software. If licenses are purchased for the application AND the licenses have the same metric as the application: Average cost per license (metric) × Number of unused installations If no licenses are purchased for the application OR the licenses have different metrics than the application: Application cost per metric × Number of unused installations The risk also shows to what extent the application is used, displayed in percentage: (Number of unused installations / Total number of installations) × 100

5.2 MANAGE APPLICATIONS

This chapter describes how to manage applications in Snow License Manager.

5.2.1 EDIT APPLICATION

1. On the **Applications** menu, click **List all applications** or **Search for applications** and find one or more applications to be edited.
2. To edit one application:
 - a. Click the application row.
The **Application detail view** appears.
 - b. On the context menu, click **Edit application**.
3. To edit several applications at the same time:
 - a. Select the applications.
 - b. Click **Edit applications** on the context menu.
The **Multiple application editing view** appears.
4. Edit the information in the fields on the tabs according to the following sections.
5. Click **Save**.

5.2.1.1 GENERAL INFO TAB

To edit additional information about the application, edit the settings on the **General info** tab:

1. Type a **Description** of the application.
2. Type **Serial numbers/license keys** for easy access during installation/reinstallation.
3. In the **Media** box, type information on storage location of the installation media.
4. In the **System owner** boxes, type information on whom to get in contact with in case of any questions or issues with this specific application.

5.2.1.2 LICENSE SETTINGS TAB

To select and enter license related information, edit the settings on the **License settings** tab.

LICENSE INFORMATION

Depending on selected metric a number of available fields and options will be displayed in the **License information** section.

- **Metric: Custom compare values**
If the metric is set to **Custom compare values**, select a **Custom compare value type** in the list.
- **Metric: Number of processors, Number of processor cores**
If the metric is set to **Number of processors** or **Number of processor cores**, define the minimum number of licenses per computer that is required for the application according to the license agreement. Type the quantity in the **Minimum number of licenses** box.
- **Metric: Users**
If the metric is set to **Users**, select a **Metric setting** in the list.

Metric setting	Description
Usage within metering period	All users that have used the application within the specified metering period (see below).

Metric setting	Description
All primary users	The primary user (most frequent user based on logon information) of a computer that has the application installed, whether or not the user has actually used the application in question.
All computer users	All users that have logged on to a computer that has the application installed, whether or not the users have actually used the application in question.

- Metric: Users, Devices, Concurrent users, Concurrent devices
 If the metric is set to **Users, Devices, Concurrent users** or **Concurrent devices**, select a metering **Period** in the list.

NOTE

For the metric **Users** the metering Period list is only available if **Usage within metering period** is selected.

Table 5. Metering periods for the metrics **Users, Devices, Concurrent users, and Concurrent devices.**

Metering period	Description	Example
Use system default	System default is Current month and is determined by the Basic setting NI_COMPARE_PERIOD in Snow MACC. NOTE Since the Data Update Job runs only once a day (by default at 9:00 PM) the usage for the "current date" will not be reported until the next day. Hence, when the current date is the first of the month, usage of the previous month will be used in the calculations instead.	<u>Example 1:</u> Current date = 24th of September Metering period = 1st of September to 24th of September <u>Example 2:</u> Current date = 1st of September Metering period: 1st of August to 31st of August
Continuou s	Data for current date and X number of days back in time, where X is defined in the Interval (days) box.	Current date = 24th of September X = 60 days Metering period = 27th of July to 24th of September
Periodical incl. current month	Data for the last day of the previous month and X number of days back in time, where X is defined in the Interval (days) box, <u>plus</u> data for the current month.	Current date = 24th of September X = 60 days Metering period = 3rd of July to 24th of September (24 + 60 = 84 days)

DOWNGRADE RIGHTS PATH

Select number of previous versions a downgrade can be made to from the **Downgrade rights path** list.

LICENSE SETTINGS

The additional settings on the **License settings** tab are described in the following table.

Additional setting	Description
Release date	The Software Recognition Service provides the General Availability Date for each application. To override this global release date, enter a Release date .
Application cost PVU CAL (Client Access License)	Type an estimated cost for each license in the box. The value is used for creating cost estimations of over- and under-licensing and total cost for installations, devices, users etc. Select Currency . The currency does not have to be the same as the currency selected in your user settings.
Enable secondary use rights	To enable secondary use rights for this application, select the check box.
Allow simultaneous multiple versions	To set that only one license is required for a computer with multiple versions of the application installed, select the Allow simultaneous multiple versions check box. Despite being selected, the feature is enabled only when there is a license that covers the local installations. Before a license is added, both versions will be displayed as requiring a license on the computer. This is done because the right of running multiple simultaneous versions on one computer is covered by the license, not by the application.
Allow simultaneous multiple editions	To set that only one license is required for a computer with multiple editions of the application, select the Allow simultaneous multiple editions check box.

5.2.1.3 OTHER SETTINGS TAB

To select how alerts should be used, edit the settings on the **Other settings** tab.

When an alert is excluded, potential over-licensing or under-licensing will be displayed in the **Applications details** view, but it will not be shown as an alert.

5.2.1.4 DOWNGRADE PATHS TAB

Use the fields on the **Downgrade paths** tab to manually add versions within the application family that this application is valid to downgrade to. The application versions can be listed in relative order to define the downgrade path.

NOTE

A manual downgrade path will override cross edition rights and downgrade paths identified by the Software Recognition Service.

ADD APPLICATION

1. In the **Available applications** list, select the application to be added.

2. Click the **Add**  icon.
The application is moved to the **The application is valid for downgrade to** list.

CHANGE DOWNGRADE ORDER

1. In the **The application is valid for downgrade to** list, select the application to be moved.
2. Click the **Up**  or **Down**  icons to move the application up or down in the list.

REMOVE APPLICATION

1. In **The application is valid for downgrade to** list, select the application to be removed.
2. Click the **Remove**  icon.
The application is moved to the **Available applications** list.

5.2.1.5 PROGRAM FILES TAB

The information on the **Program files** tab shows all identified inventoried program files and registry keys that are linked to the application. No changes can be made on this tab.

5.2.1.6 CUSTOM INFORMATION TAB

Use the **Custom information**, to add custom fields and change the values in the custom fields. Only custom fields that are created for the **Application** category are available.

For more information, see [Enter custom field information](#).

5.2.1.7 COMPARE VALUES TAB

The **Compare values** tab is available for the metric **Custom compare values**, and if this metric is not connected to a custom field.

Use the **Compare values** tab to specify the quantity per organization of the custom compare value type selected in the **License settings** tab.

To edit the settings on the **Compare values** tab:

1. To add organization node and quantity:
 - a. In the list, click the check boxes to select the organization nodes to be added, and then click **OK**.
 - b. Click **Add**.
The selected organization nodes are added to the view.
 - c. Type a custom compare value for the organization node in the **Quantity** box.
2. To change quantity, type a new custom compare value for the selected organization node in the **Quantity** box.
3. To remove organization node, click the **Remove**  icon to the right of the organization node to be removed.

EXAMPLE

Monitor compliance for Exchange email accounts

The license requirement for Client access licenses (CALs) for Microsoft Exchange Server 2010 cannot be discovered by Snow Inventory agents. A metric called **Exchange CAL** is therefore defined to monitor the compliance for **Exchange email accounts**.

The following steps are performed to monitor the compliance for the application **Microsoft Exchange Server 2010 Standard User CAL**:

1. Create a new custom compare value called **Exchange CAL** according to [Custom compare value types](#).
2. Navigate to the application details view for **Microsoft Exchange Server 2010 Standard User CAL**.
3. Click **Edit application**.
4. On the **License settings** tab, set the **Metric** to **Custom compare values**, and set the **Custom compare value type** to **Exchange CAL**.
5. On the **Compare values** tab, specify the number of Exchange email accounts for each organization node and for this application.
6. Click **Save**.
7. On the context menu, click **Add application license**.
The **Add license** view appears.
8. In the **Quantity** box, type the number of CALs purchased.
9. Click **Save** and then click **Recalculate compliance** on the **Administration** menu.
10. On the **Allocation** tab, analyze the compliance for the application.

5.2.1.8 STORE TAB

Use the **Store** tab to specify whether this application should be available for order in Software Store or not. Available software is indicated by the information message **Available in Software Store** in the application details view.

NOTE

The Store tab is only available if the setting SOFTWARE_STORE_OPTION_ACTIVE has been enabled, and if the logged in user has the required permissions to administer applications in the Software Store. Settings and permissions are managed in Snow MACC.

To make an application available and to define how it will be displayed in the Software Store:

1. Select the **Available in Software Store** check box.
Input fields are enabled.
2. In the **Name** box, optionally change the application name. This name will be displayed in the Software Store.
3. Type a **Description** of the application which will be displayed in the Software Store.
4. Click **Browse** to upload an application **Image**.
5. Type a **Cost** and a **Rental cost** for the application.
Note that these costs are set using the base currency of Snow License Manager.
6. If orders of this application needs approval from a Group Manager, select the **Require organizational approval** check box.

7. If orders of this application needs approval from the application owner, select the **Require application owner approval** check box. Type the **Application owner's AD username** in the box that is displayed.
8. Select how this application will be provisioned from the **Provisioning type** list, and type the related **Identifier (AD group)**.
9. From the **Publish level** list, select the actions that will be available for this application in the Software Store.
10. For additional **Uninstall options**, click **Change** (the button is only enabled when **Publish level** is set to **Uninstall** or **Install and Uninstall**). Select one of the following settings:
 - **No limited use:** The application will not be automatically uninstalled.
 - **Uninstall this application based on time:** The application will be automatically uninstalled from the user's computer after a set number of days. A notification can be sent to the user before the application is removed. Optionally, the user can be offered to extend the subscription with a number of days.
 - **Uninstall this application based on usage:** The application will be automatically uninstalled from the user's computer if it has not been used for a set number of days. A notification can be sent to the user before the application is removed.

NOTE

The number of days must be less than specified in the setting METERING_HISTORY_MONTHS in Snow Management and Configuration Center, so that Snow License Manager has enough metering/usage data to provide data for this scenario.

5.2.1.9 BUNDLE OPTIONS

On the Bundle options tab, select to unbundle an application bundle in order to license the included applications individually instead. This is done on the computer where the application is installed.

This tab is only available for bundles.

5.2.2 CHANGE DEFAULT METRIC

The default metric describes the general licensing conditions for an application. In Snow License Manager, the default metric is set per application, meaning that an application only can have one default metric. To change the metric for a license, you need to edit the application that the license is attached to.

NOTE

The default metric can only be changed if the metric for all registered license purchases is according to the default metric. For example, the default metric for an application with the default metric **Devices** can only be changed if all registered license purchases have the metric **Devices**. However, if licenses are added to applications with the default metric **Installations**, **Number of processors** and **Number of processor cores**, then the default metric can be changed to any of **Installations**, **Number of processors** and **Number of processor cores**.

1. Navigate to the application to be edited.
2. On the context menu, click **Edit application**.

3. On the **License settings** tab, select the new **Metric** from the list.
4. Click **Save**.

5.2.3 WHITELIST APPLICATION

A whitelisted application is approved for installation and usage in the IT environment. For more information on the application whitelist and how to specify criteria and automation rules that result in a whitelist of approved applications, see [Application whitelist](#).

5.2.3.1 ADD APPLICATION TO WHITELIST

To add an application to the system's whitelist:

1. Navigate to the application to be whitelisted.
2. On the context menu, click **Whitelist application**, and then click **OK**.
The information message **Whitelisted** is added to the application details view.



5.2.3.2 REMOVE APPLICATION FROM WHITELIST

To remove an application from the system's whitelist:

1. On the **Home** menu, click **Administration**.
The **Administration overview** appears.
2. Click **Application whitelist**.
The **Application whitelist** appears.
3. Find the application, click **Remove** , and then click **OK**.

5.2.4 BLACKLIST APPLICATION

An application on the system's blacklist is not approved for installation and usage in the IT environment. For more information on the application blacklist and how to specify criteria and automation rules that result in a blacklist of not approved applications, see [Application blacklist](#).

5.2.4.1 ADD APPLICATION TO BLACKLIST

To add an application to the system's blacklist:

1. Navigate to the application to be blacklisted.
2. On the context menu, click **Blacklist application**, and then click **OK**.
The warning message **Blacklisted** is added to the application details view.



5.2.4.2 REMOVE APPLICATION FROM BLACKLIST

1. On the **Home** menu, click **Administration**.
The **Administration overview** appears.

2. Click **Application blacklist**.
The **Application blacklist** appears.
3. Find the application, click **Remove** , and then click **OK**.

5.2.5 APPLICATION USE RIGHTS

Application use rights can be assigned to users to, for example, monitor and ensure correct usage of expensive applications. When a user without use rights uses the application, an alert will be generated.

An application with registered use rights is indicated by the warning message **Application rights registered**.

5.2.5.1 ADD APPLICATION USE RIGHTS

1. Navigate to the application.
2. On the **Users** tab, right-click the user that will receive use rights of the application, and then click **Add rights to user**.
 - All users without use rights of the application are highlighted in red in the list.
 - The warning message **Application rights registered** is added to the application.

5.2.6 BUNDLE OPTIONS

Application bundle licensing is removed from (or restored on) the computer where the bundle component is installed.

5.2.6.1 REMOVE BUNDLE LICENSING

1. Navigate to the application for which bundle licensing is to be removed.
2. On the context menu, click **Edit application**.
3. On the **Bundle options** tab, find the computer for which the bundle licensing is to be removed and click **Unbundle**.
4. Click **Save**.
A message box appears where the change needs to be confirmed.
5. In the **Application details** view and on the **Computers** tab, the computer with the removed bundling is indicated by the remark **UB**.
6. On the Administration menu, click **Recalculate compliance**.
In the **Application details** view, information on **Installations**, **License requirement** and **Compliance** is corrected accordingly.

5.2.6.2 RESTORE BUNDLE LICENSING

1. Navigate to the application for which bundle licensing is to be restored.
2. On the context menu, click **Edit application**.
3. On the **Bundle options** tab, find the computer for which the bundle licensing is to be restored and click **Bundle**.
4. Click **Save**.
A message box appears where the change needs to be confirmed.

5. On the Administration menu, click **Recalculate compliance**. In the **Application details** view, information on **Installations**, **License requirement** and **Compliance** is corrected accordingly.

5.3 APPLICATION MANUFACTURERS

The **Application manufacturers** view shows a list of all identified application manufacturers in the system. Pie charts are provided for a quick overview.

5.3.1 APPLICATION MANUFACTURERS DETAIL VIEW

The top section of the **Application manufacturers** detailview shows pie charts with information on **Top application installations** and **Top application license cost** for the selected manufacturer.

The bottom section of the detail view shows information on applications (both with and without license requirements), software agreements, and license purchases.

5.4 APPLICATION FAMILY OVERVIEW

All versions and editions of an application are together called an application family. In Snow License Manager, the application families are defined by the Software Recognition Service.

The **Application family overview** summarizes for example the license cost, compliance, and risk for applications belonging to the same family. The information can be used to optimize the licensing within an application family.

To view an **Application family overview**:

- In the top section of the **Application detail view**, click the **Application family** link.

The Application family overview consists of:

- A **graph** showing the number of installations per application and the percentage of how many consumers that are covered by a license.
- A **summary** of for example license cost, compliance and risk.
- **Detailed information** about the applications listed in tabs.

5.4.1 GRAPH

The graph shows specific bars for the five applications with the latest versions and editions, and a summarized bar for the older versions and editions. Only applications being installed and requiring a license are shown in the graph.

When pointing to a bar in the graph an information box appears. The information box shows the details on the coverage of the application.

5.4.2 SUMMARY

The summary shows licensing information for the whole application family.

The information is described in the following table.

Parameter	Description
Total license cost	The sum of <i>Total license cost</i> for all applications in the family.
Compliance	Compliance is calculated regardless of metric, and is here shown in percentage. Compliance is calculated as: (Sum of covered consumers / Total number of consumers) × 100
Risk	Sum of the risk for every application in the application family.
Unused installations	Assigned licenses with no registered usage compared to the total number of licenses, shown in percentage.
Risk (Unused installation)	The cost for unused installations.
Not utilized licenses	The sum of not utilized, unassigned and incorrectly assigned licenses compared to the total number of purchased licenses, shown in percentage.
Potential overspend	Calculated as: Not utilized licences × Total license cost

5.4.3 DETAILED INFORMATION

Detailed information about the applications is listed in tabs.

To find more information that can be used to optimize the licensing for the application family, click an application in the list on the **Applications** tab. Go to **Tracking** on the **Licenses** tab in the **Application detail view**.

5.5 APPLICATION REPORTS

There is a number of stock reports for applications, for example;

- All applications
- Application compliance history
- Installations per organization
- Operating systems

It is possible to modify the content and filtering of the existing stock reports, or create own reports.

6 COMPUTERS

The **Computers** category gives detailed information on the IT environment, such as computers, mobile devices, datacenters/clusters, and devices (RDS/Citrix). Here, information on available hardware can be found as well as information on which applications and users that have been using a specific computer.

6.1 COMPUTERS DETAIL VIEW

To show detailed information on a specific computer, click the item in a list of computers.

The information boxes in the **Computers** detail view shows information on usage and cost according to the following table.

Applications	Users	Cost	Last scanned
			
Number of applications installed on the computer.	Number of users of the computer.	Total cost of the computer.	Date for last update of computer data.

The bottom section of the detail view contains detailed information on the computer. The information is presented in tabs according to the following table.

Tab	Description
Applications	A list of all applications installed on the computer. For more information, see Applications tab .
Users	All users that have been logged on to the computer and when.
Hardware	Basic hardware information collected from the computer during the inventory. Information on devices such as printers, hard drives, etc. is based on inventoried drivers.
Information	General information on the computer. The information is grouped by information type. Note that some information is maintained manually and is therefore not available until registered.
Financial info	Financial information on the computer.
Devices	The devices that have been connected to the computer using RDP, Citrix, etc. or via a virtual desktop connection.
Remote servers	The servers to which the computer has been connected as a terminal using RDP, Citrix, etc.

Tab	Description
Virtual desktops	A list of the virtual desktops that the computer has been connected to. Available if the computer has accessed a virtual desktop.
Printers	All identified printer drivers installed on the computer.
Documents	Manually uploaded documents and links related to the computer. For more information, see Manage documents and links .
Oracle	Details about the Oracle databases and information on the Oracle orders associated with the server. Available for servers running Oracle database products.

6.1.1 APPLICATIONS TAB

The **Applications** tab shows a list of all applications installed on the computer

An arrow  to the left of the application name in the list is available for all applications with **registered usage**. Click the arrow to expand a list of users that have used this application on the specific computer. The following usage is registered per user:

- **Last used:** The last date and point of time when the application was used on the computer.
- **Run:** How many times the application has been executed on the computer.
- **Total time:** Total application usage displayed in days, hours, and minutes.

Applications can be marked with a background color according to the following table.

Scenario	Background color
No blacklist of application is specified. The setting <code>ACTIVATE_APPLICATION_WHITELISTING</code> is disabled in Snow Management and Configuration Center .	White background.
A blacklist of applications is specified. The setting <code>ACTIVATE_APPLICATION_WHITELISTING</code> is disabled in Snow Management and Configuration Center .	Applications that are blacklisted have a red background. All other applications have a white background.
A blacklist of applications is specified. The setting <code>ACTIVATE_APPLICATION_WHITELISTING</code> is enabled in Snow Management and Configuration Center .	Applications that are whitelisted have a white background. Applications that are blacklisted have a red background. All other applications have a grey background.
The application is run on the specific computer but is not installed , for example an application installed on a server share.	Orange background.

6.2 MANAGE COMPUTERS

This chapter describes how to manage computers in Snow License Manager.

6.2.1 EDIT COMPUTER

1. On the **Computers** menu, click **List all computers** or **Search for computers** and find one or more computers to be edited.
2. To edit one computer:
 - a. Click the computer row.
The **Computer detail view** appears.
 - b. On the context menu, click **Edit computer**.
3. To edit several computers at the same time:
 - a. Select the computers.
 - b. Click **Edit computers** on the context menu.
The **Multiple computer editing view** appears.
4. Edit the information in the fields on the tabs according to the following sections.
5. Click **Save**.

6.2.1.1 GENERAL TAB

To enter information on the **General** tab:

1. Enter information on **Purchase date**, **Purchase price** and **currency**, **Vendor** and **Invoice reference**. Note that currency may vary and does not have to correspond to the default viewing currency.
2. Select computer **Status**. Available options:
 - **Active** - The computer is active in the system and will require licenses for installed applications.
 - **Quarantined** - The computer is placed in quarantine after a defined number of days of not reporting inventory data, but will still require licenses for its installed applications. If automatic quarantine management is activated (in Snow MACC) the computer will automatically be placed in quarantine, and then removed from the system or set to inactive.
 - **Inactive** - The computer is not active in the system (when in storage for example) and does not require licenses for its installed applications. The computer is not included in compliance calculations. However, if the computer is still reporting to the Snow Inventory server, it will update its data in Snow License Manager. When an inactive computer reports inventory data, an alert is displayed.
3. Select **Organization** node that this computer belongs to.
4. In the **Security code** box, type any anti-theft label on the computer.
5. To disable auto connect rules, select the **Disable auto editing** check box.
6. To prevent the computer from being placed in quarantine status or removed from the system if it stops reporting inventory data, select the **Disable automatic quarantine management** check box.
7. In the **Physical socket capacity**, type the number of processor sockets in the computer.

8. For physical servers that use MCM processors, select the **Uses MCM Processors** check box and type the number of **Chip modules per processor** in the box. This information is used to calculate and present number of populated physical sockets in the Oracle Server Worksheet report for servers that use MCM processors.
9. To enable secondary use rights:
 - a. Click the **Search**  icon to the right of the **Sibling computer** box. The **Search for computer** dialog box appears.
 - b. Type the search criterion and click **Search**. A list of computers that match the search criterion is displayed.
 - c. Select the computer to be added from the list.
10. For virtual machines, type **Host computer name**. Selected host/virtual machine will be displayed on the **Information** tab of the virtual machine. To remove a host computer, click the **Clear**  icon to the right of the box.

6.2.1.2 AGREEMENTS TAB

Select one or more check boxes to attach the computer to one or more agreements.

If the correct agreement is not available in the list, it has to be created.

6.2.1.3 CUSTOM INFORMATION TAB

On the **Custom information** tab, enter information and values in the custom fields that are available for the **Computer/mobile device** category.

For more information, see [Enter custom field information](#).

6.2.1.4 IDENTIFIED FILES TAB

The **Identified files** tab shows all identified inventoried application files on the computer. No changes can be made on this tab.

6.2.1.5 DOCUMENTS TAB

On the Documents tab, click **Add document** to upload documents or add links related to the computer.

For more information, see [Manage documents and links](#).

6.2.1.6 EXTENDED COVERAGE TAB

Use the **Extended coverage** tab to specify which computer the coverage should be extended to, for which application, and for what reason.

Add or remove which computer the coverage should be extended to.

ADD COMPUTER

1. Click the **Search**  icon. The **Search for computer** dialog box appears.
2. Type the search criterion and click **Search**. A list of computers that match the search criterion is displayed.
3. Select the computer to be added from the list.

4. Select an application from the **Select application** list.
5. Select a reason from the **Select the reason for extending coverage** list.
6. Click **OK**.
The dialog box is closed and the selected computer is displayed in the **Computer** box.
7. Click **Add** to the right of the **Computer** box.
The selected computer is added to the list of computers with extended coverage.

REMOVE COMPUTER

- Click the **Remove**  icon to the right in the list, and then confirm the deletion.

6.2.1.7 ORACLE TAB

The **Oracle** tab is only available for servers running Oracle database products, and is used for associating a server with one or several Oracle orders.

To associate a server with an Oracle order:

1. Click **Add**.
The **Search for Oracle order** item dialog box appears.
2. Type the search criterion (Customer Support Identifier, CSI, or Product name) and click **Search**.
A list of Oracle orders that match the search criterion is displayed.
3. Click the check boxes to select the correct Oracle order, and then click **OK**.
The order is added to the list of Oracle orders.

6.2.2 ARCHIVE COMPUTER

When a computer is archived, a snapshot of the computer details is saved before the computer is removed from the system. Since an archived computer is removed, all licenses currently attached to it are released. The saved details can be accessed using the computer report **Archived computers**.

NOTE

- An archived computer cannot be restored.
- An archived computer does not consume, that is, does not count towards the unit limit of the Snow License Manager license.

ARCHIVE ONE COMPUTER

1. Navigate to the specific computer to be archived.
2. On the context menu, click **Edit computer**.
3. Click **Archive** in the top right corner, and then click **Yes**.

ARCHIVE ONE OR MORE COMPUTERS

1. On the **Computers** menu, click **List all computers** or **Search for computers** and find the computers to be archived.

2. Select the check boxes to the left of the computers to be archived.
3. On the context menu, click **Archive computers** and then click **OK**.

6.2.3 DELETE COMPUTER

For information on how to delete computers, see [Delete category items](#).

6.3 MOBILE DEVICE DETAILS

The information boxes in the **Mobile device details** view shows information on usage and cost according to the following table.

Applications	User	Cost	Last scanned
			
Number of applications installed on the mobile device.	The user of the mobile device.	Total cost of the mobile device.	Date for last update of mobile device data.

The bottom section of the detail view contains detailed information on the mobile device. The information is presented in tabs according to the following table.

Tab	Description
Applications	A list of all applications installed on the mobile device. For more information, see Applications tab .
Users	The user that has been using the mobile device and when.
Hardware	Shows basic hardware information collected from the mobile device during the inventory scan.
Information	Shows general information on the mobile device. The information is grouped by information type. Note that some information is maintained manually and is therefore not available until registered.
Financial info	Shows financial information on the mobile device.
Documents	Shows manually uploaded documents and links related to the mobile device. For more information, see Manage documents and links .

6.3.1 APPLICATIONS TAB

The **Applications** tab shows a list of all applications installed on the mobile device. Applications can be marked with a background color according to the following table.

Scenario	Background color
No blacklist of application is specified. The setting <code>ACTIVATE_APPLICATION_WHITELISTING</code> is disabled in Snow Management and Configuration Center .	White background.
A blacklist of applications is specified. The setting <code>ACTIVATE_APPLICATION_WHITELISTING</code> is disabled in Snow Management and Configuration Center .	Applications that are blacklisted have a red background. All other applications have a white background.
A blacklist of applications is specified. The setting <code>ACTIVATE_APPLICATION_WHITELISTING</code> is enabled in Snow Management and Configuration Center .	Applications that are whitelisted have a white background. Applications that are blacklisted have a red background. All other applications have a grey background.

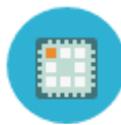
6.4 DATACENTERS AND CLUSTERS

The **Datacenters and clusters** overview provides a summary with information on licensed applications, physical servers, and virtual machines (inventoried and total number) on each identified datacenter/cluster.

Datacenters and clusters that have been added based on inventory data are indicated as “auto generated” in the **Description** column.

6.4.1 DATACENTER/CLUSTER DETAIL VIEW

The information boxes in the **Datacenter/cluster details** view shows information on for example the number of hosts, processor, and cores, according to the following table.

Hosts	Processors	Cores	Virtual machines	License coverage
				
Number of hosts connected to the datacenter	Total number of processors for the datacenter members	Total number of processor cores for the datacenter members	Number of virtual machine connected to the datacenter	The percentage of instances covered by available licenses*

* The license coverage shows the percentage of all licensable applications on all hosts and their virtual machines that are fully covered by licenses. The license coverage is an indicator of the overall level of risk of the datacenter.

The bottom section of the detail view contains detailed information on the datacenter and clusters. The information is presented in tabs according to the following table.

Tab	Description
Licenses	All licenses that are connected to the datacenter/cluster.
Applications	All applications that are connected to the datacenter/cluster.
Hosts	All hosts that are connected to the datacenter/cluster. If any host has virtual machines installed, the number of the virtual machines can be seen in the column Virtual machines.
Virtual machines	The virtual machines that are connected to the datacenter/cluster.
Features	Available for auto generated VMware datacenters and shows licensed Product Features.
General	General information on the datacenter/cluster.
Oracle	Only displayed for datacenter/clusters with Oracle products installed. DATABASES All computers with Oracle databases installed. ORDERS All Oracle orders for the datacenter/cluster.

6.5 DEVICES

A device is a computer or object that has been connected to one or more remote desktop servers and/or virtual desktops. A device could be either an inventoried computer or a non-inventoried object.

Select **List all devices** from the category navigation to see all devices in the IT environment. Click a device to see the device details.

6.5.1 DEVICE DETAIL VIEW

The top section of the detail view contains general information on the device.

The bottom section of the detail view contains detailed information on the device. The information is presented in tabs according to the following table.

Tab	Description
Users	All users that have been logged on to the device
Applications	Applications installed on the device
Remote servers	The remote desktop servers that the device has been connected to
Virtual desktops	Available if the device has accessed a virtual desktop, and displays a list of the virtual desktops that the device has been connected to.
Features	Available for auto generated VMware datacenters and shows licensed Product Features.

Tab	Description
General	General information on the device. The information in the list is sorted by information type.

6.6 COMPUTER AND MOBILE DEVICE REPORTS

There is a number of stock reports for computers and mobile devices, for example;

- All computers
- Application installation history
- Applications per computer
- Archived computers
- All mobile devices
- Applications per mobile device
- Mobile device hardware information

It is possible to modify the content and filtering of the existing stock reports, or create own reports.

7 MOBILE DEVICES

This chapter describes how to manage mobile devices in Snow License Manager.

7.1 EDIT MOBILE DEVICE

1. On the **Computers** menu, click **List all mobile devices** or **Search for mobile devices** and find one or more mobile devices to be edited.
2. To edit one mobile device:
 - a. Click the mobile device row.
The **Mobile device detail view** appears.
 - b. On the context menu, click **Edit mobile device**.
3. To edit several mobile devices at the same time:
 - a. Select the mobile devices.
 - b. Click **Edit mobile devices** on the context menu.
The **Multiple mobile devices editing view** appears.
4. Edit the information in the fields on the tabs according to the following sections.
5. Click **Save**.

7.1.1 GENERAL TAB

To enter information on the **General** tab:

1. Enter information on **Purchase date**, **Purchase price**, **currency**, **Vendor** and **Invoice reference**. Note that currency may vary and does not have to correspond to the default viewing currency.
2. Select mobile device **Status** from the list:
 - **Active** - The mobile device is active in the system and will require licenses for installed applications.
 - **Quarantined** - The mobile device is placed in quarantine, but will still require licenses for its installed applications. If automatic quarantine management is activated (in Snow MACC) the mobile device will automatically be placed in quarantine and removed from the system when it stops reporting inventory data.
 - **Inactive** - The mobile device is not active in the system (when in storage for example) and does not require licenses for its installed applications. The mobile device is not included in compliance calculations. However, if the mobile device is still reporting to the Snow Inventory server, it will update its data in Snow License Manager. When an inactive mobile device reports inventory data, an alert is displayed.
3. Select **Organization** node that this mobile device belongs to from the list.
4. In the **Security code** box, type any anti-theft label on the mobile device.
5. To disable auto connect rules, select the **Disable auto editing** check box.
6. To prevent the mobile device from being placed in quarantine status or removed from the system if it stops reporting inventory data, select the **Disable automatic quarantine management** check box.

7.1.2 AGREEMENTS TAB - MOBILE DEVICES

On the **Agreements** tab, select one or more check boxes to attach the mobile device to one or more agreements.

If the correct agreement is not available in the list, it has to be created.

7.1.3 CUSTOM INFORMATION TAB

On the **Custom information** tab, enter information and values in the custom fields that are available for the **Computer/mobile device** category.

For more information, see [Enter custom field information](#).

7.1.4 IDENTIFIED FILES TAB

The **Identified files** tab shows all identified inventoried application files on the mobile device. No changes can be made on this tab.

7.1.5 DOCUMENTS TAB

On the **Documents** tab, click **Add document** to upload documents or add links related to the mobile device.

For more information, see [Manage documents and links](#).

7.2 DELETE MOBILE DEVICE

For information on how to delete mobile devices, see [Delete category items](#).

8 DATACENTERS AND CLUSTERS

This chapter describes how to manage datacenters and clusters in Snow License Manager.

8.1 ADD DATACENTER AND CLUSTER

1. On the **Computers** menu, click **Datacenters and clusters**.
The **Datacenters and clusters** view appears.
2. On the context menu, click **Add datacenter/cluster**.
The **Datacenter and cluster** detail view appears.
3. Enter information on the **General**, **Hosts**, and **Extended coverage** tabs according to the following sections.

8.1.1 GENERAL TAB

Use the fields on the **General** tab to enter information on the datacenter/cluster:

1. Type a **Name** for the new datacenter/cluster.
2. Select **Organization** node that the datacenter/cluster belongs to from the list.
3. For datacenters that are managed by a controller, select the **Controller** from the list.
 - To add a **Controller**:
 - a. Select the **Select a controller** drop-down list.
The **Search controller** dialog appears.
 - b. Select the controller manually from the list, or click **Search controller** and start typing a search criterion; a list of computers that match the search criterion is displayed.
 - c. Select the computer to use as controller.
 - To remove a **Controller**, click the **Select a controller** drop-down list, and then select **Clear**.
4. Type a **Description** for the datacenter/cluster.
5. Select the **Hypervisor technology** that is used for the datacenter/cluster.
 - If **VMware vSphere** is selected as hypervisor, an additional option appears at the bottom of this screen. Select **Datacenter is a VMware DRS cluster** if the VMware DRS feature has been enabled for this cluster.
6. Select **High availability enabled** if high availability is used for the datacenter/cluster. If you are unsure whether it is, check with the administrator of the cluster.

8.1.2 HOSTS TAB

Use the **Hosts** tab to add servers that will be included in the datacenter/cluster:

1. Click **Add hosts**.
2. To select hosts, either use the check boxes on the left-hand side of the screen to select multiple hosts, or filter the list of available hosts by typing a search criterion and subsequently select hosts; a list of computers that match the search criterion is automatically displayed.

3. Select the servers to be added, and then click **Save**.
4. The selected servers are added to the **Hosts** list.

To delete a host, click **Delete** on the right-hand side of the host to delete.

8.1.3 EXTENDED COVERAGE TAB

Use the **Extended coverage** tab to specify for which datacenter/cluster the coverage should be extended to, for which application, and for what reason.

1. Select **Extend coverage**.
The **Select application** screen appears.
2. Select the **Select application** drop-down list.
The **Search for application** dialog appears.
3. Select the application manually from the list, or select **Search for application** and start typing a search criterion; select the application from the list of applications that match the search criterion.
4. Select a reason from the **Coverage reason** list.
5. Select **Select datacenter/cluster**.
6. Select the datacenter/cluster to extend coverage to.
7. Select **Extend coverage**.
The selected datacenter/cluster is added to the list of datacenters/clusters with extended coverage.

8.2 EDIT DATACENTERS AND CLUSTERS

For information on how to edit datacenters and clusters, see [Edit category items](#). For information on how to edit the information on the tabs, see [Add datacenter and cluster](#).

9 DEVICES

This chapter describes how to manage devices in Snow License Manager.

9.1 EDIT DEVICE

1. On the **Computers** menu, click **List all devices** and find one or more devices to be edited.
2. To edit one device:
 - a. Click the device row.
The **Device detail view** appears.
 - b. On the context menu, click **Edit device**.
3. To edit several devices at the same time:
 - a. Select the devices.
 - b. Click **Edit devices** on the context menu.
The **Multiple device editing view** appears.
4. Edit the information in the fields on the **General** tab according to the following section.
5. Click **Save**.

9.1.1 GENERAL TAB

Use the fields on the **General** tab to edit information on the device:

1. Select **Organization** node that this device belongs to from the list.
2. Select device **Status** from the list:
 - **Active** - The device is active in the system and will require licenses for installed applications.
 - **Quarantined**- The device is placed in quarantine, but will still require licenses for its installed applications. If automatic quarantine management is activated (in Snow MACC) the device will automatically be placed in quarantine and removed from the system when it stops reporting inventory data.
3. To prevent the device from being placed in quarantine status or being removed from the system if it stops reporting inventory data, select the **Disable automatic quarantine management**.
4. To disable auto connect rules, select the **Disable auto editing** check box.
5. Click **Save**.

10 USERS

The **Users** category gives complete information on all users and the usage of the IT environment.

10.1 USERS DETAIL VIEW

To show detailed information on a specific user, click the item in a list of users.

The top section of the detail view contains general information on the user.

Applications	Computers	Devices	Logged in
			
Number of applications used by the user.	Number of computers used by the user.	Number of devices used by the user.	Shows when the user was last logged in.

The bottom section of the detail view contains detailed information on the user. The information is presented in tabs according to the following table.

Tab	Description
Applications	<p>The applications that have been used by the user, as well as details concerning the usage.</p> <p>An arrow  to the left of the application name in the list is available for all applications with registered usage. Click the arrow to expand a graph of the usage.</p>
Computers	<p>Which computers the user has logged on to and when.</p> <p>The list includes both computers and servers, such as Citrix and Terminal Server.</p>
Mobile devices	Which mobile devices that are registered on the user.
Information	<p>General information on the user.</p> <p>The information is grouped by information type. Note that some information is maintained manually and is therefore not available until registered.</p>
Devices	The devices (not inventoried computers) from which this user has run applications.
Application rights	The applications that the user has been given application use rights to.
Subscription plans	The Microsoft Office 365 subscription plans that has been assigned to the user.
Documents	<p>Uploaded documents and links related to the user.</p> <p>For more information, see Manage documents and links.</p>

10.2 EDIT USERS

1. On the **Users** menu, click **List all users** or **Search for users** and find one or more users to be edited.
2. To edit one user:
 - a. Click the user row.
The **User detail view** appears.
 - b. On the context menu, click **Edit user**.
3. To edit several users at the same time:
 - a. Select the users.
 - b. Click **Edit users** on the context menu.
The **Multiple user editing view** appears.
4. Edit the information in the fields on the tabs according to the following sections.
5. Click **Save**.

10.2.1 GENERAL TAB

Use the fields on the **General** tab to enter information on the user:

1. Select **Organization** node that this user belongs to from the list.
2. If not populated already, type **Full name** of the user to facilitate searches. Normally, this information is automatically populated by Snow Inventory.
3. Type the user's contact information; **Location, Room number, Phone number, Mobile phone number** , and **E-mail**.
4. Select user **Status** from the list:
 - **Active** - The user is active in the system and will require licenses for usage of applications.
 - **Quarantined** - The user is placed in quarantine, but will still require licenses for its usage of applications. If automatic quarantine management is activated (in Snow MACC) the user will automatically be placed in quarantine and removed from the system when it stops reporting inventory data.
5. To prevent the user from being placed in quarantine status or being removed from the system if it stops reporting inventory data, select the **Disable automatic quarantine management** check box.
6. To disable auto connect rules, select the **Disable auto editing** check box.

10.2.2 CUSTOM INFORMATION TAB

On the **Custom information** tab, enter information and values in the custom fields that are available for the **Users** category.

For more information, see [Enter custom field information](#).

10.2.3 APPLICATION RIGHTS TAB

Use the **Application rights** tab to add and remove application rights to the user.

10.2.3.1 ADD APPLICATION RIGHTS

1. Click the **Search for application**  icon.
The **Find application** dialog box appears.
2. Type a search criterion, and then click **Search**.
A list of applications that match the search criteria is displayed.
3. Select the application to be added from the list, and then click **OK**.
4. Click **Add**.
The selected application is added to the list of assigned applications.

10.2.3.2 REMOVE APPLICATION RIGHTS

- Click the **Remove**  icon.
The application is removed from the list of assigned applications.

10.2.4 DOCUMENTS TAB

On the **Documents** tab, click **Add document** to upload documents or add links related to the user.

For more information, see [Manage documents and links](#).

10.3 DELETE USER

For information on how to delete users, see [Delete category items](#).

10.4 USER REPORTS

There is a number of stock reports for users, for example;

- All users
- Applications per user
- Blacklisted applications per user

It is also possible to modify the content and filtering of the existing stock reports, or create your own reports.

11 CLOUD

The **Cloud** category gives detailed information on cloud services. At the moment there is functionality for Microsoft Office 365 and other SaaS (Software as a Service) providers. In the future, functionality for other cloud services will be added.

11.1 MICROSOFT OFFICE 365

The **Microsoft Office 365** overview shows detailed information on the subscription plans, users, subscriptions, and costs for the cloud service. It is possible to analyze the information to see for example the number of subscriptions that has not been assigned to users and the cost for these subscriptions.

The information is imported from the Microsoft Office 365 portal via Snow Integration Connector, see the **User guide for Microsoft Office 365 Connector** for more information.

The information on the Microsoft Office 365 overview is organized in **content** tabs. On each content tab, a graph enables the user to analyze the information during a period of time and a table enables the user to analyze detailed information since the last import.

The following table describes the content tabs for Microsoft Office 365.

Content tab	Description
Total users	<p>A graph enables the user to follow the total number of Microsoft Office 365 users over the last 12 months.</p> <p>A table shows all users within Microsoft Office 365 shown per subscription plan since the last import. The activity graphs show a preview of when users last used any of the subscriptions included in the subscription plan.</p> <p>Click a subscription plan to analyze the information for the plan, for example:</p> <ul style="list-style-type: none"> ▪ All users and the activity for the users ▪ Application usage ▪ Not linked users <p>For more information, see Link Snow License Manager users with Microsoft Office 365 users.</p>
Assigned subscriptions	<p>A graph enables the users to compare the total number of Available subscriptions, Assigned subscriptions, Expiring subscriptions, and Total subscriptions for the last 12 months.</p> <p>A table shows the subscription plans and the number of available, assigned, and expiring subscriptions, and the total number of subscriptions since the last import.</p>

Content tab	Description
Total cost per month	<p>A graph enables the user to compare the costs for the Available subscriptions and the Assigned subscriptions for the last 12 months.</p> <p>A table shows the subscription plans and the associated costs since the last import.</p> <p>NOTE The Accumulated total cost is the sum of the costs for the subscription plans for the last 12 months.</p>

NOTE

Snow License Manager imports information from the Microsoft Office 365 portal about the total number of subscriptions and the number of subscriptions that have been assigned to users. However, there is no information about the costs for the Microsoft Office 365 subscriptions in the portal. Therefore, the cost periods must be added in Snow License Manager to be able to analyze this. For information about how to add cost periods, see [Edit cost information](#).

11.1.1 LINK SNOW LICENSE MANAGER USERS WITH MICROSOFT OFFICE 365 USERS

To get the most value out of the Microsoft Office 365 features in Snow License Manager, a match between existing users gathered from the inventory sources and the Microsoft Office 365 portal users must be made. The usage of on premise applications, such as Microsoft Office 365 Pro Plus and Project or Visio Pro for Microsoft Office 365, can then be connected to the corresponding user and subscription plan. Also, to automatically detect license coverage of applications included in Microsoft Office 365, Snow License Manager users must be linked with Microsoft Office 365 users.

To see the users that need linking for each Office 365 subscription:

1. On the **Microsoft Office 365** overview and on the **Total users** tab, click the row for the subscription plan that you want to analyze.
A list of all users in the estate who have been assigned to this subscription plan appears.
2. Click **Not linked users**.

LINK USERS WHEN USING SNOW INVENTORY 5

If Snow Inventory 5 is used, enable **Active Directory user discovery** in the **Snow Inventory Admin Console** to link Snow License Manager users with Microsoft Office 365 users. The Active Directory data will then be used to match against the Microsoft Office 365 portal data. For more information on how to enable Active Directory user discovery, see the *User Guide for the Snow Inventory Admin Console*.

LINK USERS WHEN NOT USING SNOW INVENTORY 5

If Snow Inventory 5 is not used, link the Snow License Manager Users with the Microsoft Office 365 users by importing an update of the users:

1. Find and export a list of Snow License Manager users that you want to match to a corresponding Microsoft Office 365 user.

The Snow License Manager users are found in the **All users** report or in the **List all users** view.

2. Remove all columns except the user name and add a column called Office 365 UPN to the user export and add the matching Microsoft Office 365 User Principle Name for each user. The Microsoft Office 365 users are found on the **Users tab** on the **Microsoft Office 365** overview or in the Microsoft Office 365 portal.
3. Import the data by updating the existing users according to [Import data](#). At the Field mappings step, ensure that the Office 365 UPN field is mapped to the Email address field.

During the next import of the Microsoft Office 365 connector, correctly mapped users will be linked. The import can be manually triggered in the Snow Integration Manager user interface.

NOTE

If less than 80 % of all Snow License Manager users are not linked with Microsoft Office 365 users, then an information message is displayed showing the percentage of linked users.

To show more information about how to increase the number of linked users, click **Learn more** and follow the instructions.

11.1.2 ANALYZE MICROSOFT OFFICE 365 DATA

The **Microsoft Office 365** overview can be used to analyze the Microsoft Office 365 data. The overview can for example be used to find users that are not using their subscription plan, users that should switch from one subscription plan to another, and the cost for a specific subscription plan.

11.1.2.1 FIND USERS THAT ARE NOT USING THEIR SUBSCRIPTION PLAN

1. On the **Microsoft Office 365** overview and on the **Total users** tab, click the row for the subscription plan that you want to analyze.
A list of all users in the estate who have been assigned to this subscription plan appears.
2. Click **Not linked users**, to filter the list of users.
A list of users that have not been linked to an existing user in any inventory source appears.
3. Investigate the not linked users to find out why the users are not linked.
For more information about not linked users, see [Link Snow License Manager users with Microsoft Office 365 users](#).
4. In the **Active last** column, filter the list of users.
5. Analyze the users that have no activity and no activity for more than for example 30 days.

11.1.2.2 FIND USERS THAT SHOULD SWITCH FROM MICROSOFT OFFICE PLAN E3 TO E1

Users that subscribe to the **Microsoft Office 365 Plan E1** are not allowed to install desktop versions of Microsoft Office applications. Users that subscribe to the **Microsoft Office 365 Plan E3** are allowed to install desktop versions of Microsoft Office applications.

By filtering the data on recent application activity, it is possible to find users that should switch from Microsoft Office 365 Plan E3 to Microsoft Office 365 Plan E1. It is also possible to find users that might have left the company and should no longer have a subscription plan.

To find users that should switch from Microsoft Office Plan E3 to E1:

1. On the **Microsoft Office 365** overview and on the **Total users** tab, click the **Microsoft Office 365 Plan E3** row.
A list of all users in the estate who have been assigned a subscription for Microsoft Office 365 Plan E3 appears.
2. Click **Not linked users**, to filter the list of users.
A list of users that have not been linked to an existing user in any inventory source appears.
3. Investigate the not linked users to find out why the users are not linked.

NOTE

If a user is not linked to an inventory source it is not possible to determine whether or not the user is using installed desktop versions of Microsoft Office applications.

For more information about linked users, see [Link Snow License Manager users with Microsoft Office 365 users](#).

4. Click **Application usage** to view detailed information about which applications each user is using.
5. In the Last activity columns, filter the list of users for each application.
6. Investigate the users that should be migrated from an E3 to an E1 plan and users that no longer should have a subscription plan:

11.1.2.3 ANALYZE COST PER SUBSCRIPTION PLAN

1. On the **Microsoft Office 365** overview, perform one of the following:
 - On the **Total users** tab, click the row for the subscription plan that you want to analyze, and then click the **Total cost for the current month** tab.
 - On the **Total cost for the current month** tab, click the row for the subscription plan that you want to analyze.
2. On the **Total cost for the current month** tab, analyze the total costs, for example the costs for available subscription licenses, the cost for users with no activity, and the accumulated total cost.

11.1.2.4 OPTIMIZE MICROSOFT OFFICE 365 SUBSCRIPTION PLANS

The report **Microsoft Office 365 user activity and cost per subscription plan** found in the **Microsoft** category can be used as input for optimization of Microsoft Office 365 subscription plans. The report contains for example the following information:

- All data from the Microsoft Office 365 portal
- Costs for the subscription plans
- User activity
- If the user is linked to an inventoried user

11.1.3 MANAGE MICROSOFT OFFICE 365 SUBSCRIPTION PLANS

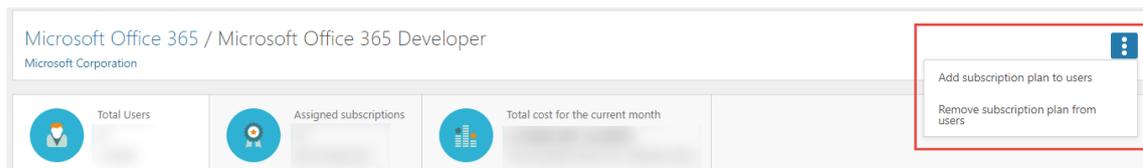
The Microsoft Office 365 overview shows detailed information about the users assigned a Microsoft Office 365 subscription plan and if they are using it. To optimize the costs and to ease the management, subscription plans can be added and removed in Snow License Manager.

NOTE

Subscription plans can only be added and removed in Snow License Manager if the Automation book Office 365 Automation is imported. For more information see the document **Automation book Office 365 Automation**.

11.1.3.1 ADD SUBSCRIPTION PLAN

1. On the context menu of a subscription plan, click **Add subscription plan to users**.



The **Add subscription plan** view appears.

2. In the list of users, click **Add subscription plan** for the users that this subscription plan should be added to.
3. Click **Preview and finish**.
A summary of the selected users appears.
4. Review the users.
5. To remove a user from the summary, click **Undo**.
6. Click **Request addition**.
A summary of users that are pending addition of the subscription plan appears. The subscription plans will be added when the requests have been processed by Automation Platform.

11.1.3.2 REMOVE SUBSCRIPTION PLAN

1. On the context menu of a subscription plan, click **Remove subscription plan from users**.
The **Remove subscription plan** view appears.
2. In the list of users, click **Remove subscription plan** for the users that this subscription plan should be removed from.
3. Click **Preview and finish**.
A summary of the selected users appears.
4. Review the users.
5. To remove a user from the summary, click **Undo**.
6. Click **Request removal**.
A summary of users that are pending removal of the subscription plan appears. The subscription plans will be removed when the requests have been processed by Automation Platform.

11.2 SAAS OVERVIEW

The **SaaS overview** provides an initial overview of which SaaS (Software as a Service) service providers are being used in the organization, by which users and how much they are using them. For a number of key SaaS service providers, the overview shows for example how many subscriptions has been purchased, who has been assigned the subscription and what is their cost.

The information is imported from the service providers via Snow Integration connector, see **User guide for SaaS connectors**.

The information on the SaaS overview is organized in **content** tabs. On each content tab, a graph enables the user to analyze the information during a period of time and a table enables the user to analyze detailed information since the last import.

The functionality is broken down into three levels, starting at an aggregate overview, then drilling down into more details. Click a SaaS service provider to drill down into more details for the specific SaaS provider, and then click a subscription to drill down into more details for the specific subscription type. The following table describes the first level of information.

Content tab	Description
Total user accounts	<p>A graph enables the user to follow the total number of SaaS user accounts over the last 12 months.</p> <p>A table shows all SaaS user accounts per provider since the last import and how many user accounts have login activity.</p>
Total monthly cost	<p>A graph enables the user to follow the cost for the SaaS subscriptions over the last 12 months.</p> <p>A table shows the SaaS service providers and the associated costs since the latest import.</p>

NOTE

Snow License Manager imports information from the SaaS service providers about the total number of subscriptions and the number of subscriptions that have been assigned to users. However, there is no information about the costs for the subscriptions from the service providers. Therefore, the cost periods must be added manually in Snow License Manager to be able to analyze this. For information about how to add cost periods, see [Edit cost information](#).

11.3 EDIT COST INFORMATION

To be able to analyze the costs for Microsoft Office 365 subscription plans and SaaS subscriptions, **cost information** must be added. When adding a cost period, the month from when the period starts is defined together with the monthly cost for the subscription plan per user.

If cost information is missing from one or more subscription, then a warning message is displayed. For Microsoft Office 365, the subscription plans that are missing cost information are also highlighted with a warning icon on the **Total cost for the current month** tab.

A cost period is valid until a new cost period is added. Hence, if the cost for a subscription plan changes, a new cost period must be added. It is possible to add both older and future cost periods. However, it is only possible to add an old cost period if there is data for this period. It is not possible to change a cost period, but it is possible to delete a cost period.

EXAMPLE

You have a subscription plan for Microsoft Office 365 since February 2016. You started to import data from Microsoft Office 365 to Snow License Manager in March 2017. Thus, it is possible to add a cost period starting in March 2017.

11.3.1 ADD NEW COST PERIOD

- To add a cost period for a Microsoft Office 365 subscription plan or a SaaS subscription, perform one of the following actions:

- To add a cost period for a Microsoft Office 365 subscription plan:

On the **Total cost for current month** tab and on the context menu for the subscription plan, click **Edit subscription plan**.

Subscription plans	Account	Monthly cost per ...	Total cost for current month (EUR)		Total cost for the ...	Accumulated tota...	
			Available subscrip...	Assigned subscrip...			
Microsoft Project Pro for Office 365		74.67	149.34	1,941.42	2,090.76	15,531.36	⌵
Microsoft Office 365 Plan E3		1.52	264.48	1,229.68	1,494.16		Options
Microsoft Visio Pro for Office 365		0	0	0	0		Edit subscription plan
Microsoft ...		2	14	192	206		

- To add a cost period for a SaaS subscription:

On the **Total monthly cost** tab for the subscription type, click **Edit cost periods**.

The **Cost periods** dialog box appears.

- Click **Add new cost period**.
- Select the month and year from when the periods starts.
- Set the price for the subscription plan or subscription and select the currency for the period.

NOTE

For a SaaS subscription, the cost model can vary and depends on the service provider.

- Click **Add period**.
The added cost period is being processed.
- Click **Close**.
- If the cost period is not added automatically, refresh the page.

11.3.2 DELETE COST PERIOD

- To delete a cost period for a Microsoft Office 365 subscription plan or a SaaS subscription, perform one of the following actions:

- To delete a cost period for a Microsoft Office 365 subscription plan:

On the **Total cost for current month** tab and on the context menu for the subscription plan, click **Edit subscription plan**.

- To delete a cost period for a SaaS subscription:

On the **Total monthly cost** tab for the subscription type, click **Edit cost periods**.

The **Cost periods** dialog box appears.

- Click **Delete** for the cost period to be deleted.
- Click **Yes, delete period**.
The deleted cost period is being processed.
- Click **Close**.
- If the cost period is not deleted automatically, refresh the page.

11.4 CLOUD REPORTS

There is a number of stock reports for applications, for example;

- All cloud applications
- Microsoft Office 365 subscription plan cost
- Microsoft Office 365 user activity and cost per subscription plan

12 AGREEMENTS

Agreements, including master and sub-agreements, can be viewed and managed in the Agreements category.

12.1 AGREEMENTS DETAIL VIEW

To show detailed information on a specific agreement, click the item in a list of agreements.

The top section of the detail view contains general information on the agreement.

Type	Agreement number	Total cost	Expiration date	Renewal date
				
The type of agreement.	The agreement number.	The total cost for the agreement. Note that incomplete license purchases are not included.	The date when the agreement expires. When agreement has expired: red icon	The date when the agreement must be renewed. When agreement is not renewed: red icon

The bottom section of the detail view contains detailed information on the agreements. The information is presented in tabs according to the following table. Depending on selected agreement type, available tabs will vary.

Tab	Description
Sub-agreements	All defined sub-agreements for this agreement.
Licenses	All licenses attached to the agreement.
Computers/Mobile devices	All computers/mobile devices attached to the agreement.
Objects	All objects attached to the agreement (e.g. mobile phones, printers, and monitors)
Orders	Information on the Oracle orders attached to the agreement.
Agreement periods	Between which dates the agreement is valid.
Settings	General settings for the agreement.
Information	General information and the custom fields that have been created for the agreement. The information is sorted by information type.
Description	A description of the agreement.

Tab	Description
Documents	Uploaded documents and links related to the agreement. For more information, see Manage documents and links .

12.1.1 TOTAL COST

If there are licenses linked to an agreement, the **Total cost** or value of the agreement is visible from the top section of the agreement detail view. If no financial information is visible within the agreement, then either there are no licenses linked to the agreement or there is no financial information entered on the license. Note that incomplete license purchases are not included in the Total cost.

To see a cost breakdown for all licenses attached to the agreement, click the **Total cost** box.

12.2 MANAGE AGREEMENTS

This chapter describes how to manage agreements in Snow License Manager.

12.2.1 ADD AGREEMENT

1. On the **Agreements menu**, click **Add agreement**.
The **Add agreement** view appear.
2. Enter information in the fields on the tabs according to the following sections.
3. Click **Save**.

12.2.1.1 GENERAL TAB

Use the fields on the **General** tab to enter general information, for example agreement type and agreement number, on the agreement.

NOTE

Depending on selected agreement type, available fields and options will vary.

1. Select agreement **Type** from the list.
To be able to attach licenses to the agreement, select **Software agreement**. All other agreement types are hardware related so it is not possible to attach a license. For more information about Agreement types, see [Agreement](#).
2. Type **Agreement number** and **Agreement name** according to the manufacturer.
If the agreement has an Agreement number and Agreement name, then use those.
However, if there is no unique number or specific agreement name, internally agree on a naming convention so it is done the same way by everyone within the organization.
3. For Oracle agreements, select **Status** from the list:
 - Select **Valid** when registering a new agreement.
 - To ensure traceability, historical agreements should still be available in the system. When upgrading or migrating an agreement, select the status **Terminated** to highlight that this agreement is no longer valid

4. To automatically attach computers to the agreement (not available for Software agreements and Oracle agreements), select the **Auto attach computers** check box and select organization nodes from the list.
5. For subscription agreements, select the **Subscription agreement** check box.

NOTE

The period of a Subscription agreement will override any Subscription period for licenses attached to the agreement if the **Subscription agreements** check box is selected. This impacts which licenses are included in the compliance calculation. If you wish to add a subscription period for each license instead then do not check this check box. You can still add expiration and renewal information.

6. For software agreements with upgrade rights, select the **Automatic license upgrades** check box to specify that upgrade rights apply, and that each license manually added and connected to the agreement will have upgrade rights.
7. To make the agreement visible in the agreements lists even after expiration, select the **Selectable after expiration** check box.

12.2.1.2 AGREEMENT PERIODS TAB

Use the **Agreement periods** tab to specify start and end dates for the agreement. Note that agreement periods cannot overlap.

If the agreement is renewed check whether all licenses attached to the agreement are included in the renewal:

- If the **licenses are included in the renewal** add the new agreement period to the existing agreement.
- If the **licenses are not included in the renewal** do one of the following:
 - Create a new agreement for the renewal and attach the licenses covered by the renewal.
 - Add the new periods to the existing agreement but detach the licenses which are not covered by the new agreement.

To edit the detail on the **Agreement periods** tab:

1. Click **Add new period**.
2. Select dates from the **Valid from** and **Valid to** lists, and then click **OK**.
The agreement period is added to the list.

12.2.1.3 CONTACT INFO TAB

Use the Contact info tab to add contact information, for the contractor as well as for the agreement owner within your own organization:

Add contact information on **Contractor**, **Contractor contact**, and **Local contact**. If the agreement was signed with the application manufacturer add that manufacturer as Contractor. If the agreement was signed through a reseller add the reseller as Contractor. The local contact is the agreement owner within the organization.

12.2.1.4 ALERTS TAB

Use the **Alerts** tab to specify if agreement expiration should give alerts on the Snowboard/Overview.

1. To activate agreement alerts, select the **Activate alerts on and before agreement expiration** check box.
2. In the **Renewal** box  , type number of days before expiration that this agreement needs to be renewed, or is automatically renewed as stated in the agreement.

EXAMPLE

If the actual renewal date is the end date of the agreement, type 0.

If the renewal date is 3 months before the end date of the agreement, type 90.

3. In the **Warning** box  , type number of days before expiration that an agreement alert will appear as a warning.
4. In the **Critical** box  , type number of days before expiration that an agreement alert will appear as critical.

It is also possible to add email notifications to give alerts when an agreement is about to expire. For more information, see [My notifications](#).

12.2.1.5 DESCRIPTION TAB - AGREEMENTS

Use the **Descriptions** tab to add specific information related to the agreement, for example metrics, geographical restrictions and use rights. This will save time when adding licenses relating to the agreement as the key information will be easily visible, rather than having to search through the attached agreement document each time.

Read through the agreement and copy and paste or type the specific information in the white area of the tab.

12.2.1.6 DOCUMENTS TAB - AGREEMENTS

Use the **Documents** tab to upload documents or add links related to the agreement. It is recommended to give the documents meaningful names to prevent having to open each document to see what it is.

Click **Add document** to upload documents or add links related to the agreement.

For more information, see [Manage documents and links](#).

12.2.1.7 CUSTOM INFORMATION TAB

Use the **Custom information** tab to enter information and values in the custom fields that are mandatory for the **Agreement** category.

For more information, see [Enter custom field information](#).

12.2.1.8 SECURITY TAB

The **Security** tab is used to manage the security for the agreements, on an organization and role level. By attaching the agreement to one or more roles, the system will only make the agreement available to users attached to the specific role. For management of roles, refer to the User Guide of Snow Management and Configuration Center.

- To limit access to the agreement on an organization level, select one or more organization nodes from the **Organization access** list and select the **Restrict access according to organization setting** check box.
- To limit access to the agreement on a role level, select the **Allow access to the following roles only** check box and use the check boxes to the left to select the roles.

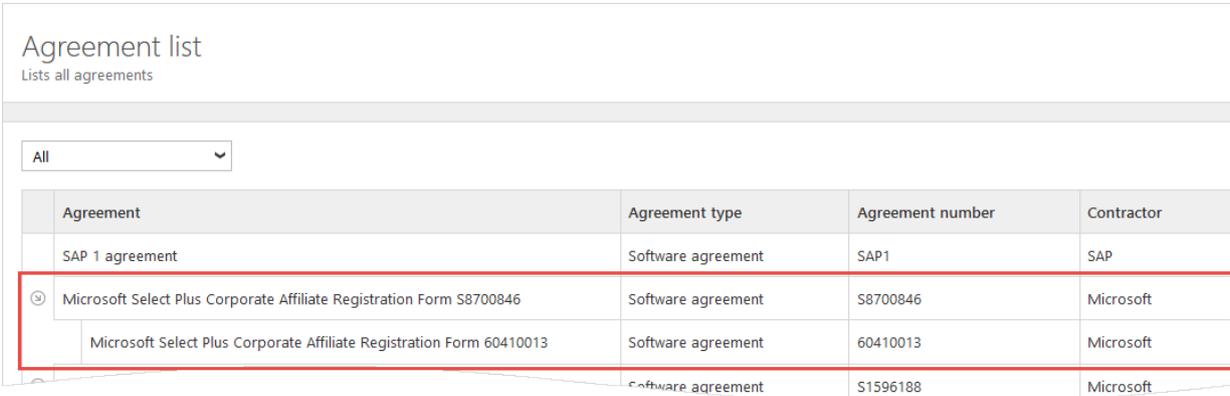
12.2.2 EDIT AGREEMENT

1. On the **Agreements** menu, click **List all agreements** or **Search for agreements** and find the agreement to be edited.
2. Click the agreement row.
The **Agreement detail view** appears.
3. On the context menu, click **Edit agreement**.
4. Edit the information in the fields on the tabs according to [Add agreement](#) .
5. Click **Save**.

12.2.3 MANAGE SUB-AGREEMENTS

There are two ways of connecting agreements to each other. An agreement can either be attached to another agreement as a sub-agreement, or be selected as master to another agreement which will then act as a sub-agreement.

In the **List all agreements** view, the relationships between master and sub-agreements is indicated by an arrow .



Agreement	Agreement type	Agreement number	Contractor
SAP 1 agreement	Software agreement	SAP1	SAP
 Microsoft Select Plus Corporate Affiliate Registration Form S8700846	Software agreement	S8700846	Microsoft
Microsoft Select Plus Corporate Affiliate Registration Form 60410013	Software agreement	60410013	Microsoft
	Software agreement	S1596188	Microsoft

12.2.3.1 ADD SUB-AGREEMENT

1. Navigate to the agreement that will be used as master.
2. On the context menu, click **Add sub-agreement**.
3. Add a new agreement according to [Add agreement](#)

12.2.3.2 ATTACH AGREEMENT TO MASTER

1. Navigate to the agreement that will be used as sub-agreement.
2. On the context menu, click **Attach to master**.
The **Attach to master** dialog box appears.

3. Select the agreement that will be used as master from the **Agreement** list and click **Save**.
The sub-agreement is added to the **Sub-agreements** tab of the selected master agreement.

12.2.3.3 VIEW MASTER AGREEMENT

1. Navigate to the sub-agreement.
2. On the context menu, click **Show master agreement**.
The Master agreement detail view appears.

12.2.3.4 DETACH SUB-AGREEMENT

1. Navigate to the agreement to detach.
2. On the context menu, click **Detach from master**, and then confirm the detachment.

12.2.4 ADD, EDIT AND DELETE CUSTOM AGREEMENT TYPES

A custom agreement type can be used in case the pre-defined agreements types in Snow License Manager are not applicable, and it can be used for any type of agreement.

1. To manage custom agreement types, click **Custom Agreement types** on the **Agreements** menu.
The **Custom Agreement types** view appears.
2. Add, edit or delete a custom agreement type according to the following sections.

12.2.4.1 ADD CUSTOM AGREEMENT TYPE

1. On the context menu, click **Add agreement type**.
The **Add agreement type** view appears.
2. Enter information in the fields on the tabs according to the following table.
3. Click **Save**.

12.2.4.2 EDIT CUSTOM AGREEMENT TYPE

To edit details of an existing agreement type:

1. Navigate to the custom agreement type to be edited.
2. Enter information in the fields on the tabs according to the following table.
3. Click **Save**.

Tab	Instruction
General	<ol style="list-style-type: none"> 1. Type a Name and a Description of the agreement type. 2. To make it possible to attach computers to agreements of this type, select the Computer attachments active check box 3. To make it possible to attach objects to agreements of this type, select the Object attachments active check box.
Custom information	Enter information and values in the custom fields that are mandatory for the Agreement category. For more information, see Enter custom field information .

12.2.4.3 DELETE CUSTOM AGREEMENT TYPE

1. Navigate to the specific custom agreement type to be deleted.
2. Click **Delete** in the top right corner, and then confirm the deletion.

NOTE

Only custom agreement types that have no agreements attached can be deleted. A deleted custom agreement type is removed from the system and cannot be restored.

12.2.5 DELETE AGREEMENT

For information on how to delete agreements, see [Delete category items](#).

12.3 AGREEMENT REPORTS

There is a number of stock reports for agreements, for example;

- All agreements
- Attached computers per agreement
- License purchase records per agreement

It is possible to modify the content and filtering of the existing stock reports, or create own reports.

13 LICENSES

In the **Licenses** category all license purchases can be viewed and managed, and compared to installations and usage.

13.1 LICENSE DETAIL VIEW

To show detailed information on a specific license, click the item in a list of licenses.

The top section of the detail view contains general information on the license purchase. Some information is clickable to show more details, such as the Incomplete warning that shows the reasons that make the license incomplete.

Metric	Default metric	Purchase price	Quantity
			
The metric for the license.	The default metric for the application.	The purchase price for the license.	The number of licenses purchased.

The bottom section of the detail view contains detailed information on the license. The information is presented in tabs according to the following table.

Tab	Description
Purchase	A summary of the information and settings that have been registered for the license purchase.
Maintenance and support	Information on maintenance and support costs registered for the license purchase. Also, information on current upgrade rights is shown here.
Assignment	How the license purchase has been assigned (to organization, site, user, or computer/datacenter)
Information	General information on the license purchase, sorted by information type.
Documents	Uploaded documents and links related to the license purchase. For more information, see Manage documents and links .

13.1.1 PURCHASE TAB

The **Purchase tab** displays details that are related to the license purchase.

If a license has been upgraded, the field **Upgraded to** will be available next to the **Show upgrades** link. Select **Show upgrades** to see which application that this license is upgraded to, and its quantity; select the application name to display the license that the current license is upgraded to.

If a license is upgraded from another license, the field **Upgraded from** will be available next to the **Show base licenses** link. Select **Show base licenses** to see which application that this license is upgraded from, and its quantity; select the application name to display the license that the current license is based on.

For more information on the fields that are available in this tab, see [Purchase tab](#)

13.1.2 MAINTENANCE AND SUPPORT TAB

The **Maintenance and support** tab lets the user keep track of periodical costs connected to the license purchase. Any registered costs will be included in the **Total license cost** displayed on the **Financial info** tab in the application details view.

There are three options for adding maintenance and support periods to a license purchase;

1. Add period and application upgrade rights manually.
2. Use period and application upgrade rights according to an existing agreement that this license purchase has been registered as a part of.
3. Use application upgrade rights according to the application SKU, and add period manually.

If a license has manually set upgrade rights and registered periods for maintenance and support, and that is changed to be according to an agreement instead, then these manually registered settings are replaced by the settings of the selected agreement.

When an agreement is updated with a new period, any license purchases that are part of that agreement will be updated regarding their maintenance and/or support periods.

13.2 MANAGE LICENSES

This chapter describes how to manage licenses in Snow License Manager.

13.2.1 ADD LICENSE PURCHASE

Correct registration of license purchases is important to achieve accurate compliance statements from Snow License Manager.

To make the registration of a license purchase complete, Snow License Manager requires certain information to be entered, such as application, number of licenses, and metric. There may also be a license policy defined by the system administrator, making more fields mandatory.

To add a new license purchase:

1. Perform one of the following steps:
 - Navigate to the application, and then click **Add application license** on the context menu.
 - On the **Licenses** menu, click **Add License**.

The **Add license** view appears. If the license is added as an application license, the correct application is pre-selected on the **Purchase** tab.

2. Enter information in the fields on the tabs according to the following sections.
3. Click **Save**.

For more information on how to copy a license, see [Copy license purchase](#).

13.2.1.1 PURCHASE TAB

Use the **Purchase** tab to enter information on the license purchase.

1. Enter **Date of purchase**.
This date will be used by the system to check available agreements.
2. Select the **Legal organization** that is the owner of the license from the list.
Only one legal organization can be selected for each license purchase (normally the top level of the organization).
With auto allocation enabled, licenses will be allocated from selected organization level and downwards.
3. Type the **Purchase price** and select **currency** from the list.
The currency does not have to correspond with the default viewing currency.
New currencies are added in Snow MACC.
4. Type an **Invoice reference**.
5. To select the **Application** that the license purchase applies to (if not already selected):
 - a. Click the **Search**  icon.
The **Find application** dialog box appears.
 - b. Select to search by application name or SKU.
 - c. Type a search criterion, and then click **Search**.
 - d. Select application in the displayed list and then click **OK**.
 - e. When applicable, select **Stock-keeping unit (SKU)** from the list.
New currencies are added in Snow MACC.
6. If the license is part of an agreement, perform the following steps:
 - a. Select the **Agreement** from the list.
The **agreement period** is displayed to the right of the **Agreement** text box.
 - b. Ensure that **Date of purchase** is within the selected agreement period.

If the agreement is not available, it could be for one of the following reasons:

 - The license purchase date is not within the agreement period.
 - The agreement has expired and the option **Selectable after expiration** is not enabled for the agreement.
 - The agreement has not yet been created.
7. In the **Quantity** box, type the number of licenses included in the purchase.
The box is only editable for new and incomplete licenses.
8. Select **Metric** from the list.
Available metrics for the license depend on the metric of the application.
9. If the metric is **Installations** or **Users**, select **Assignment type** from the list.
Depending on selected assignment type, assignments to an **Organization, Computer/ datacenter, User, or Site** must be made on the **Assignment** tab. For more information on assignment types, see [Assignment types](#).
10. If the license is purchased with downgrade rights, select the **Downgrade rights** check box.
11. If the license is an upgrade license, select the **Upgrade license** check box. When selected, the additional tab **Base licenses** will appear.
12. If the license allows for coverage of applications within the family (same version) and with the same or lower edition, select the **Cross edition rights** check box.

13. If the license allows for coverage of applications within the family (same version) and with the same edition, regardless of the operating system they are installed on, select the **Cross platform rights** check box.
14. If the license is a subscription license, select the **License has a subscription period** check box, and then enter a subscription period using the **From** and **To** calendar views.

13.2.1.2 MAINTENANCE AND SUPPORT TAB

Use the **Maintenance and support** tab to register any maintenance and support periods and costs for this license.

If a license purchase is both part of an agreement and has a SKU with application upgrade rights, both the **According to agreement** and **Use upgrade rights according to SKU** will be available as options. However, only one option can be selected.

NOTE

Information on **Period from** and **Period to** is required, or the license purchase will be registered as incomplete.

ADD PERIOD AND UPGRADE RIGHTS MANUALLY

1. Click **Add period**.
A row with input fields is added to the table.
2. Select dates from the **Period from** and **Period to** calendars.
3. Use the **Invoice reference** and **Notes** textboxes for reference and comments (optional).
4. If the license includes application upgrade rights, select **Yes** from the **Upgrade rights** list.
5. Optionally, use the **Support cost** and **Maintenance cost** textboxes to specify the current costs.

USE PERIOD AND UPGRADE RIGHTS FROM AN EXISTING AGREEMENT

1. Select the **According to agreement period** option.
One or several rows with input fields are added to the table, where dates for **Period from** and **Period to** are fetched from the agreement together with any application **Upgrade rights**.
2. Use the **Invoice reference** and **Notes** textboxes for reference and comments (optional).
3. If the agreement includes no application upgrade rights but the license purchase does, select **Yes** from the **Upgrade rights** list.
4. Optionally, use the **Support cost** and **Maintenance cost** textboxes to specify the current costs.

USE UPGRADE RIGHTS FROM SKU

1. Select the **Use upgrade rights according to SKU** option and click **Add period**.
A row with input fields is added to the table where application **Upgrade rights** are fetched from the SKU.
2. Select dates from the **Period from** and **Period to** calendars.
3. Use the **Invoice reference** and **Notes** textboxes for reference and comments (optional).

- Optionally, use the **Support cost** and **Maintenance cost** textboxes to specify the current costs.

13.2.1.3 ASSIGNMENT TAB

Depending on selected assignment type for the license, assignments to an **Organization**, **Computer/datacenter**, **User**, or **Site** must be made. The assignment type is selected on the **Purchase** tab. The assignment types are defined in [Assignment types](#).

ASSIGNMENT TYPE: ORGANIZATION

To select **Automatic allocation** for the license purchase:

- To have the licenses automatically allocated at each compliance calculation, and based on the actual needs in the organization, select the **Auto allocate** check box.
- To have the licenses allocated only once and then keep that allocation, select the **Disable auto allocation after first calculation** check box.

To select **Manual allocation** for the license purchase:

- Leave the **Auto allocate** check box cleared.
- Select one organization node at a time from the list and click **OK**. The legal organization level is always added as default.
- Click **Add** to add the organization node.
- Type the **Quantity** of licenses allocated to each organization node.

ASSIGNMENT TYPE: COMPUTER/DATACENTER

To assign the purchased licenses to one or more computers:

- Click **Add**.
A search dialog box appears.
- To search for a computer/datacenter:
 - Optionally, type search criteria.
 - Optionally, click **More options** and select the check boxes to filter the search, according to the following table.

NOTE

The starting point for the search function is to find all machines with the application installed to which the license can be assigned to, based on the use rights selected for the license. The use rights that are taken into account are downgrade rights, upgrade rights, cross platform rights and cross edition rights. To refine the search result, add filter options to the search.

Filter option	Description
Physical	Shows all physical machines with the application installed <i>and</i> all physical machines hosting a virtual machine with the application installed.
Virtual	Shows all virtual machines with the application installed.

Filter option	Description
Datcenter / Cluster	Shows all datacenters or clusters hosting physical or virtual machines with the application installed.
Show only machines hosting VMs with the application installed	Shows all physical machines, datacenters, and clusters hosting virtual machines with the application installed.
Show only machines hosting VMs with application family installed	Shows all datacenters, clusters, and physical machines hosting virtual machines with the application or an application from the same application family installed.
Show only machines requiring a license	Shows all machines* with the application installed, which are not compliant and require a license. * Physical machines, physical machines hosting a virtual machine, and datacenters or clusters hosting physical or virtual machines
Ignore use rights	Shows all datacenters, clusters, and physical and virtual machines. Use this option to find and assign a license to a machine where the application is not yet installed.

EXAMPLE

A user wants to find all physical machines with the application installed that is currently not covered by a license. The machines should host virtual machines. To find the physical machines, the user selects the following filter options:

- Physical
- Show only machines hosting VMs with the application installed
- Show only machines requiring a license

EXAMPLE

A user wants to find all datacenters that hosts at least one virtual machines with the application installed that is currently not covered by a license. To find the datacenters, the user selects the following filter options:

- Datacenters
- Show only machines hosting VMs with the application installed
- Show only machines requiring a license

EXAMPLE

A user wants to find all virtual machines with the application installed that is currently not covered by a license. To find the virtual machines, the user selects the following filter options:

- Virtual

- Show only machines requiring a license

EXAMPLE

A user wants to find all virtual machine where the application is not yet installed. To find the virtual machines, the user selects the following filter options:

- Virtual
 - Ignore use rights
- c. Click **Search**.
3. In the search result list, use the check boxes to select computers, and then click **Add**.
 4. For each computer, type number of **Assigned** licenses.
The number of **Total licenses**, **Total assigned** and **Total remaining** is changed according to the number of **Assigned** licenses.
 5. For licenses with VM use rights, set the **VM use rights** for the host with virtual instances:
 - a. Click **Change**.
The **VM use rights** dialog box appears.
 - b. Click the option that meets the license purchase conditions.
 - c. Click outside the **VM use rights** dialog box to close it.
VM use rights are now set for **Unlimited** or **Any (number)** virtual instances.
 6. To override the **Unlimited** or **Any (number)** setting and assign VM use rights to specific virtual instances:
 - a. Click the **VM use rights** cell of the host computer.
A dialog box appears.
 - b. Optionally, filter the list of virtual instances.
 - c. Use the check boxes to select the virtual instances to be assigned with a license.
 - d. Click **OK**.

For more information on VM use rights, see [VM use rights](#).

ASSIGNMENT TYPE: USER

1. Type search criteria in the **User name**, **Full name**, and/or **Organization** boxes (% can be used as wild card character) and click **Search**.
The **Search results** dialog box appears.
2. Select the user to whom the license should be attached and click **Add**.
The selected user is moved to the **Current grants** window.
3. To remove an assigned user, select the user in the **Current grants** window and click **Remove**.
The selected user is removed from the **Current grants** window.

ASSIGNMENT TYPE: SITE

To assign the purchased licenses to one or more sites:

1. Click the list, and then select a site.
2. Click **OK**, and then click **Add**.

3. Type the quantity of assigned licenses.
4. Repeat for every site to be assigned.

13.2.1.4 INFORMATION TAB

Use the **Information** tab to add additional information on the license purchase. Information entered on the **Information** tab can be used as search criteria in lists, searches, and reports using the **Column selector**.

1. Type an **External ID** (external for SLM) for the license, for example purchase order ID, or system ID.

NOTE

When the basic setting LICENSE_EXTID_CHECK is enabled in Snow MACC, this value can be used to avoid duplicate license purchase records when performing bulk imports.

2. Enter a vendor in the **Vendor** box.
3. Type information on **License proof location**.
4. Type information on **Installation media storage**.
5. Type **Serial numbers/license keys** connected to the license purchase.
6. Use the **Notes** textbox for comments.

13.2.1.5 DOCUMENTS TAB

On the **Documents** tab, click **Add document** to upload documents or add links related to the license.

For more information, see [Manage documents and links](#).

13.2.1.6 CUSTOM INFORMATION TAB

On the **Custom information** tab, enter information and values in the custom fields that are mandatory for the **License** category.

For more information, see [Enter custom field information](#).

13.2.1.7 BASE LICENSES TAB

The **Base licenses** tab is only available if the **Upgrade license** check box on the **Purchase tab** is selected.

To add a base license:

1. Select **Add**.
The **Search for license** dialog box appears.
2. Enter a search criteria and then select **Search**.
3. Select the check boxes to select one or more base licenses, and then select **OK**.
4. In the **Base licenses to upgrade** box, enter the number of base licenses to upgrade.
5. In the **Upgrade quantity** box, enter the quantity of upgrade licenses that you are entitled to.

EXAMPLE

You have registered a license where the metric is installations. You want to upgrade one of the licenses to a higher version that uses the processor metric. For the base license, you enter 1, and for the upgrade quantity you enter 2.

NOTE

If the number of base licenses available for upgrade is not enough, the license purchase will be marked as incomplete when saved.

13.2.2 COPY LICENSE PURCHASE

When multiple license purchases are to be added with more or less the same settings and information, or if a similar license already exists, the **Copy license** option can be used.

To create a new license based on another license:

1. Add the first license purchase and save it, or navigate to an existing license purchase that is to be copied.
2. On the context menu, click **Copy license**.
The **Copy license** view appears.
3. If required, edit the information on the tabs.
4. Click **Save**.

13.2.3 EDIT LICENSE

1. On the **Licenses** menu, click **List all licenses** or **Search for licenses** and find the license to be edited.
2. Click the licenses row.
The **License detail view** appears.
3. On the context menu, click **Edit computer**.
4. Edit the information in the fields on the tabs according to [Add license purchase](#).
5. Click **Save**.

13.2.4 DELETE LICENSE

For information on how to delete licenses, see [Delete category items](#).

13.2.5 UPGRADE LICENSE

Licenses can be upgraded within a single license purchase or simultaneously within multiple licenses. However, selected licenses must belong to the same application family. Note that only existing licenses can be upgraded.

To upgrade one or more licenses:

1. Perform one of the following steps:
 - To upgrade a single license:
 - a. Navigate to the license to be upgraded.
 - b. On the context menu, click **Upgrade license**.

- To upgrade multiple licenses at the same time:
 - a. On the **Licenses** menu, click **List all licenses**.
 - b. Click the check boxes to the left to select the licenses.
 - c. On the context menu, click **Upgrade**.
- 2. The **Add license view** appears.
- 3. On the **Base licenses** tab, the number of **Available base licenses** is stated. In the **Base licenses to upgrade** box for the application, type the number of base licenses to be upgraded, and in the **Upgrade quantity** box, type the quantity to upgrade to.
- 4. On the **Purchase** tab, select the application to upgrade to by performing the following steps:
 - a. Click the search icon.
The **Find application** dialog box appears.
 - b. Select to search by application name or SKU.
 - c. Type a search criteria and click **Search**.
 - d. Select application in the displayed list and then click **OK**.
- 5. Enter the rest of the license purchase information according to [Add license purchase](#).

EXAMPLE

In Snow License Manager 9, it is possible to change license metric when upgrading licenses. For example, a license for Windows Server 2008 R2 Standard has **Installations** as default metric. If that license is upgraded to Windows Server 2012 R2 Standard, the upgrade license can have **Number of processors** as metric, which is the Microsoft default metric for this Windows Server version. Subsequently, the Windows Server 2012 R2 Standard license can be upgraded to a Windows Server 2016 Standard license, then using **Number of processor cores** as metric.

For an upgrade license, one can specify the number of **Base licenses to upgrade**, and also the **Upgrade quantity**.

To trace the upgrades for a license, display it in in Snow License Manager and select the **Purchase** tab. If you are displaying a license that has been upgraded to or upgraded from, **Show base licenses** and **Show upgrades** will display, respectively.

13.2.6 ENSURE CORRECT LICENSE REGISTRATIONS

By making fields mandatory, adding lists with pre-defined options, and adding descriptions that clearly state the intended purpose of a specific field, the Snow License Manager administrator can ensure that all license purchases are registered in accordance with the IT policy of the company.

Examples of **descriptions**:

- Total purchase amount: "Affects the average price for each purchased license and must be specified, with the correct currency."
- Invoice reference: "Must be defined for the traceability of the license certificate."

Examples of **lists with pre-defined options**:

- Installation media storage: IT Department, Sales Department, HR Department

- License proof location: Bank Vault, Office Safe

To enforce correct license registrations:

1. In the **Home** category, select **Administration**.
The **Administration overview** appears.
2. Select **License policy**.
The **License policy** view appears.
3. Click the **Edit**  icon for each **Field name** to be changed.
The **Field name** dialog box appears.
4. To make a field mandatory:
 - a. Select the **Required information** check box.
 - b. Type a **Description**.
 - c. Click **Save**.
5. To include a list:
 - a. Select the **Use multi selection** list check box.
 - b. Type **Selectable options**.
 - c. To allow other values than the listed options, select the **Allow use of custom values** check box.
 - d. Click **Save**.

NOTE

The task License Policy is only available to users with administrative rights.

13.2.7 MANAGE SECONDARY USE RIGHTS

With the Secondary use rights licensing feature, one single license covers two installations of the same application on two separate computers, for instance one desktop and one laptop. Secondary use rights must be activated for the application, and a connection must be established between the two computers.

13.2.7.1 ACTIVATE SECONDARY USE RIGHTS

1. Navigate to the application.
2. On the context menu, click **Edit application**.
3. On the **License settings** tab, select the **Enable secondary use rights** check box.
4. Click **Save**.

13.2.7.2 MANUALLY SPECIFY A SIBLING COMPUTER

1. Navigate to the primary computer (desktop, work PC).
2. On the context menu, click **Edit computer**.
3. On the **General** tab, click the **Select host icon**  icon.
The **Search for computer** dialog box appears.

4. Type a search criterion to find the sibling computer (laptop, home PC), and then click **Search**. A list of computers that match the search criterion is displayed.
5. Select the sibling computer, and then click **OK**.
6. Click **Save**.

13.2.8 MANAGE WINDOWS VDA LICENSING

Managing Windows VDA licensing includes the following tasks:

- Ensure that Windows licenses with Software Assurance are registered with upgrade rights enabled.
- Register Windows Virtual Desktop Access licenses, see [Add license purchase](#).

NOTE

The instructions below only apply if the purchased Windows license entitles to Software Assurance.

To verify upgrade rights:

1. Navigate to the Windows license.
2. On the **Maintenance and support** tab, verify the **Upgrade rights** option:
 - **Upgrade rights = Yes**
The Windows license is registered *with* Software Assurance, with the stated validation period.
 - **Upgrade rights = No**
The Windows license is registered without Software Assurance.

To enable upgrade rights if **Upgrade rights = No**:

1. On the context menu, click **Edit license**.
2. On the **Maintenance and support** tab, add upgrade rights according to [Maintenance and support tab](#).
3. Click **Save**.

13.3 LICENSE REPORTS

There is a number of stock reports for licenses, for example;

- All incomplete licenses
- All licenses
- License compliance per organization
- License compliance summary
- License entitlement per organization

It is possible to modify the content and filtering of the existing stock reports, or create own reports.

14 OBJECTS

Custom objects, such as projectors, monitors, or other company assets can be managed in the **Objects** category. Create own object types and objects, and attach them to agreements for efficient asset management.

14.1 OBJECTS DETAIL VIEW

To show detailed information on a specific object, click the item in a list of objects.

The top section of the detail view contains general information on the object.

The bottom section of the detail view contains detailed information on the object. The information is presented in tabs according to the following table.

Tab	Description
Properties	Displayed properties depend on type of object.
Agreements	Agreements that this object is attached to.

14.2 MANAGE OBJECTS

This chapter describes how to manage objects in Snow License Manager.

14.2.1 ADD OBJECT

1. On the **Objects** menu, click **Add object**.
The **Add custom object** view appears.
2. To speed up the registration process when adding multiple objects, select the **After object has been saved, open new form for same object type** check box.
When selected, the system will automatically go to **Add object** with the current object type selected when you save the current item.
3. Enter information in the fields on the tabs according to the following sections.
4. Click **Save**.

14.2.1.1 PROPERTIES TAB

Use the **Properties** tab to enter properties for the object:

1. Select an **Object type** from the list.
2. Type a **Name** of the object.
3. Select **Organization** node from the list in order to attach the object to a specific part of the organization.
4. Enter **Property values** of the object.
Available property values depend on selected object type.
5. Click the **Select computer**  icon for **Linked computer** to search for a computer and link the object to it.

6. Click the **Select user**  icon for **Linked user** to search for a user and link the object to it.

14.2.1.2 AGREEMENTS TAB

The **Agreements** tab is only available if the selected object type can be attached to an agreement.

To attach the object to an agreement:

- Click the check boxes to select an agreement.

14.2.2 ADD OBJECT TYPE

To create a new object type:

1. On the **Objects** menu, click **Object types**.
2. On the context menu, click **Add object type**.
The **Add custom object type** view appears.
3. Enter information in the fields on the tabs according to the following sections.
4. Click **Save**.

14.2.2.1 INFORMATION TAB

Use the **Information** tab to enter basic information on the object type:

1. Type a **Name** of the object type.
2. Type a **Description** of the object type.
3. To make it possible to attach objects of this type to agreements, select the **This object type can be attached to agreements** check box.

14.2.2.2 PROPERTIES TAB

Use the **Properties** tab to define the fields that will be available (and mandatory) when registering an object of this type:

1. Click **Add property**.
A dialog box appears.
2. Select **Type** of field from the list.
3. Type a **Name** and a **Description** for the property.
4. To make this property mandatory for all objects of this object type, select the **Mandatory** check box.
5. Click **Save**.
6. Repeat for all properties needed.

14.2.3 EDIT OBJECT TYPE

To edit details of an existing object type:

1. On the **Objects** menu, click **Object types**.
The **Custom object types** view appears.
2. Click the object type to be edited.
The **Object type** tabs appear.

3. Edit the details for the object type.
4. Click **Save**.

14.3 OBJECTS TYPE VIEW

The **Object types** view shows a list of the custom object types that have been created locally in the SLM Web UI.

15 ENTERPRISE

The **Enterprise** category gives detailed information on the Oracle and SAP environments.

15.1 ORACLE OVERVIEW

The **Oracle overview** shows detailed information about the Oracle environment. All detailed information is only shown if the Oracle Management Option is installed. If Oracle Management Option is not installed, then only a limited amount of information will be shown. The information is presented on four tabs according to the following table.

Tab	Description
Recommendations	<p>The Recommendations tab provides a starting point for optimization of your Oracle environment. The information is divided into two parts:</p> <ul style="list-style-type: none"> <p>▪ Recommendations list</p> <p>The Recommendations list shows recommendations for a number of devices or computers that should be further investigated in your Oracle environment. An arrow or circle on the icon for each recommendation indicates if the number has increased (red arrow) or decreased (green arrow) since the last scan. To show a report of the computers or devices that should be investigated, click the recommendation.</p> <p>▪ Environment overview of discovered computers and License cost overview graphs</p> <p>The Environment overview of discovered computers graph visualizes to what extent the computers in your environment have been inventoried. To show the exact number of computers, point to the respective bar.</p> <p>The License cost overview graph shows the Oracle order cost in relation to total licensing costs. Note that only licenses with available cost information is shown here.</p>

Tab	Description
Products	<p>The Products tab shows all Oracle database editions and middleware installed in your environment.</p> <p>To view the details of a database edition, select it from the list on the left:</p> <ul style="list-style-type: none"> An overview of your installation will appear in the view pane, and Information about the number of databases and instances, for example, will appear in the left-hand list. Select Go to, to go to the Database editions detail view for more detailed information. <p>To view the details of a middleware product, select it from the list on the left:</p> <ul style="list-style-type: none"> An overview of your installation will appear in the view pane, and The information about the number of installations and servers, for example, will appear in the left-hand list. Select Go to to go to the Middleware product detail view for more detailed information. <p>WebLogic Server is the first middleware product supported by Snow License Manager. Support for other middleware products will be included in upcoming releases.</p>
Orders	<p>The Orders tab shows a list of all registered Oracle orders.</p> <p>To view detailed information for a specific order, click the order row to go to the Oracle order detail view.</p>
Reports	<p>The Reports tab shows all available Oracle reports.</p> <p>For more information about reports, see Manage reports.</p>

15.1.1 DATABASE EDITIONS DETAIL VIEW

To view all databases, instances, servers or orders for a specific Oracle database edition:

1. On the **Oracle overview**, select the **Products** tab.
2. Select the applicable Oracle database edition, and then select **Go to**.
The **Database editions detail view** appears.

The information on the **Database editions detail** view is presented in tabs according to the following table.

To navigate back to the **Oracle overview**, click the link in the breadcrumb at the top of the page.

Tab	Description
Databases	<p>The Databases tab shows detailed information on all databases using this Oracle database edition. The list of databases can be filtered by selecting Option, Management packs or Version.</p> <p>The information is based on data supplied by the Oracle Management Option inventory scan.</p> <p>To view detailed information for a specific database, click the database row to go to the Oracle database detail view.</p>

Tab	Description
Instances	<p>The Instances tab shows all installed instances using this Oracle database edition. The list of instances can be filtered by selecting Option, Management packs or Version.</p> <p>The information is based on data supplied by the Oracle Management Option inventory scan.</p> <p>To view detailed information for a specific instance, click the instance row to go to the Instance tab of the Oracle database detail view.</p>
Servers	<p>The Servers tab shows the servers that this Oracle product is installed on.</p> <p>The information is based on data supplied by the Oracle Management Option inventory scan.</p> <p>To view detailed information for a specific server, click the server row to go to the Computers detail view.</p>
Orders	<p>The Orders tab shows information on the Oracle orders associated with this Oracle product.</p> <p>The information is based on manually entered data.</p> <p>To view detailed information for a specific order, click the order row to go to the Oracle order detail view.</p> <p>To add a new Oracle order, click Add Oracle order.</p>

15.1.2 ORACLE DATABASE DETAIL VIEW

To view detailed information for a specific database:

1. On the **Oracle overview**, and on the **Products** tab, select the applicable Oracle database edition, and then select **Databases**.
The **Database editions detail** view appears.
2. Click the specific database row.
The **Oracle database detail** view appears.

The **Oracle database detail** view shows detailed information on an inventoried database according to the following table. The left area shows information about the server that the database is installed on. The information is based on data supplied by the Oracle Management Option inventory scan.

To edit information about the database, select **Edit databases** in the upper right area of the Oracle database detail view.

To navigate back to the **Database editions detail** view or the **Oracle overview**, click the links in the breadcrumb at the top of the page.

Tab	Description
Users	The Users tab shows a list of the database users.

Tab	Description
Options used	<p>The Options used tab shows a list of Oracle options, presented with name, owner, and if the option is installed, and used.</p> <p>The information is collected by the Oracle Management Option inventory scan, which is based on the Oracle LMS (License Management Services) scripts and follows the LMS guidelines, thus ensuring full Oracle compatibility.</p> <p>It is possible to manually change the values in the Installed and Used columns. This can be relevant when the results from the Snow Inventory Oracle Scanner need to be adjusted. The manually changed values will be displayed in reports.</p> <p>To manually change the values, select Edit database in the upper right area of the Oracle database detail view, and, on the Options view, select or clear the Installed and Used check boxes for one or more options.</p> <p>When one or more values for an option have been manually changed, this is indicated in the Changes column. A manually changed value can be reverted to the original value.</p> <p>Information on option usage along with the owner information is important from a license point of view, since there is a fee for most used options.</p>
Management packs agreed	<p>The Management packs agreed tab shows a list of granted Oracle Management packs, presented by name, if it is agreed, by whom, and when.</p> <p>The information is collected by the Oracle Management Option inventory scan, which is based on the Oracle LMS (License Management Services) scripts and follows the LMS guidelines, thus ensuring full Oracle compatibility.</p> <ul style="list-style-type: none"> ▪ Agreed column: The information if the Management pack is agreed is important from a license point of view, since there is a fee for most agreed Management packs. If usage of the Management pack is agreed by a user, the User column shows the username of that user. ▪ User column: The Oracle Management Option also detects usage of features that requires a Management Pack to be licensed. These will be illustrated by the User column containing one of the following: <ul style="list-style-type: none"> ◦ ACCEPTED BY DATABASE SETTING ◦ ACCEPTED BY USAGE OF SQL PROFILES <p>It is possible to manually change the values in the Granted and Agreed columns. This can be relevant when the results from the Snow Inventory Oracle Scanner need to be adjusted. The manually changed values will be displayed in reports.</p> <p>To manually change the values, select Edit database in the upper right area of the Oracle database detail view, and, on the Management packs view, select or clear the Granted and Agreed check boxes for one or more management packs.</p> <p>When one or more values for a management pack have been manually changed, this is indicated in the Changes column. A manually changed value can be reverted to the original value.</p>

Tab	Description
Feature usage	<p>The Feature usage tab shows information on usage.</p> <p>The Oracle Management Option inventory scan collects the information when available. The more recent Oracle version, the more feature usage information is available.</p> <p>NOTE Feature usage information can be used as guidance, but it is not valid as basis for licensing requirements. Instead, use the information in the Options and Management packs tabs.</p>
Instances	The Instances tab shows all installed instances that are using this database.

15.1.3 ORACLE ORDER DETAIL VIEW

To view detailed information for a specific Oracle order:

- On the **Oracle overview**, and on the **Orders** tab, select the specific order row. The **Oracle order detail** view appears.

Or, alternatively:

- Navigate to the **Database editions detail** view, and select the specific order row. The **Oracle order detail view** appears.

The top section of the **Oracle order detail** view contains general information on the Oracle order.

Order number	Cost	Order date
		
The order number for the Oracle order.	The total cost (license cost and support cost) for the Oracle order.	The order date for the Oracle order

The bottom section of the detail view contains detailed information on the Oracle order. The information is presented in tabs according to the following table.

Tab	Description
Order information	General information on the Oracle order
Contact information	Contact information on the Oracle order
Products	Products associated with the Oracle order.
Documents	Uploaded documents and links related to the Oracle order
General	General information on the Oracle order registration

15.1.4 REGISTER AN ORACLE PURCHASE

When an Oracle purchase has been made, the following needs to be done in Snow License Manager:

- Register the Support and Software Updates Agreement.
- Register the Oracle order.
- Optionally, associate the server with the Oracle order.

15.1.4.1 REGISTER THE SUPPORT AND SOFTWARE UPDATES AGREEMENT

1. On the **Agreements** menu click **Add agreement**.
The **Add agreement** view appears.
2. On the **General** tab:
 - a. In the **Type** list, select **Oracle Agreement**.
 - b. Type the **Agreement number**.
 - c. Type an **Agreement name**, for example *Oracle Support and Software Updates Agreement*.
 - d. In the **Status** list, select **Valid**.
3. On the **Agreement periods** tab, click **Add new period**.
The **Agreement period** dialog box appears.
4. Select dates from the **Valid from** and **Valid to** lists, and then click **OK**.
5. On the **Contact info** tab, type contact information.
6. Click **Save** to save the new agreement.

15.1.4.2 ADD ORACLE ORDER

To add a new Oracle order:

1. On the **Oracle overview**, and on the **Products** tab, select the database edition, and then select **Orders**.
2. On the **Orders** tab, click **Add Oracle order**.
3. On the **Order information** tab, enter the following information:
 - a. Enter **Order date**.
 - b. Select **Status** from the list:
 - When registering a new Oracle order, select **Valid**.
 - When upgrading or migrating an order, select status **Terminated** to highlight that this order is no longer valid.
This is done to ensure traceability, since historical orders should still be available in the system.
 - c. Type **Order name** and **Oracle order number**.
 - d. Type the applicable **Oracle Master Agreement (OMA)** or **Oracle License and Services Agreement (OLSA) reference**.
 - e. Optionally, type the **Reseller order number**.
 - f. Optionally, type **Internal reference number**.

- g. Select the **Currency** for this order from the list.
 - h. Type **Area of use** and **Notes** about the order.
 - i. Enter information about the person responsible for the order in the **Ordered by** section.
 - j. Enter information about the vendor or contractor for the order in the **Vendor/contractor** section.
 - k. Click **Add document** to upload documents or add links related to the order.
4. On the **Products** tab, click **Add product** and enter the following information to add the product licenses purchased on the Oracle order:
- a. Select **Product category**, **Product type**, and **Product** from the lists.
 - b. In the **Type** list:
 - Select **Normal** for a new Oracle order.
 - Select **Upgrade** when upgrading from an earlier version or upgrading to another edition.
 - Select **Migration** when changing metrics.

NOTE

The currently used metrics are Named User Plus and Processor. For older products, there are other metrics. When upgrading a database with old metrics, you need to migrate the metrics to the currently used metrics.

- c. Select **Period type**, **License type**, and **Metric** from the lists.
 - d. Type **Quantity** of licenses and **License cost**.
 - e. Type **CSI** (Customer Support Identifier).
 - f. In the **Agreement** list, select the agreement to attach the Oracle order to.
 - g. In the box to the right of the **Agreement** list, type the support and upgrade cost for the agreement, normally 22% of the purchase price.
 - h. Click **Add product** to save the changes.
 - i. Repeat [Step 4](#) for all products included in the order.
5. Click **Save**.

15.1.4.3 ASSOCIATE SERVERS WITH THE ORACLE ORDERS

The following needs to be done for all servers to be associated with the Oracle order.

1. In the **Computers** category, navigate to the server.
2. On the context menu, click **Edit computer**.
The **Edit computer** view appears.
3. On the **Oracle** tab, click **Add**.
4. In the dialog box, type search criteria for the Oracle order item, and then click **Search**.
5. Click the check boxes to select the correct Oracle order, and then click **OK**.
6. Click **Save**.

15.2 SAP OVERVIEW

The **SAP overview** shows information provided by the Snow Optimizer for SAP Software. The information can be either automatically imported from file via the Web Configurator, or manually imported from file using the SAP import wizard in the **Import data** view.

NOTE

The **SAP overview** is only available if the setting SAP_ENABLED has been set, and if the logged in user has the required permission to view the information. System settings and permissions are set in Snow MACC.

NOTE

All information on the **SAP overview** page is read-only.

The user will be notified when the imported SAP data is more than 90 days old.

15.2.1 TOP 5 LICENSE TYPE RECOMMENDATION

The top section of the **SAP overview** shows a **Top 5 metric recommendation** graph. Information on the current count of used metrics is displayed together with the count recommended by the Snow Optimizer for SAP Software. The graph shows the metrics with the largest absolute difference in current and recommended count.

To view more details in the **All SAP user accounts** report:

- Click **View report** in the top right corner.

15.2.2 USER SUMMARY

The **User summary** shows information based on the import file.

User summary		
23041 Accounts	18102 Licensable users	1.27 Average accounts per licensable user

Accounts

Number of identified user accounts

Licensable users

Number of licensable users after user account consolidation by the Snow Optimizer for SAP Software

Average accounts per licensable user

Average number of user accounts per licensable user

15.2.3 DETAILED INFORMATION

The bottom section of **SAP overview** contains detailed information on the utilization of SAP software. The information is presented in tabs according to the following table.

Tab	Description
Systems	The number of users of each identified SAP system software. Information is based on the import file and is view-only.
Applications	The number of installations and users for each identified SAP software based on information in Snow License Manager. Only applications with installations or users will be displayed. Click an application to open the application details.
Licenses	Information on each license purchase of SAP software registered in Snow License Manager. Only licenses attached to an application will be displayed. Click a license to open the license details.
Agreements	Information on each SAP agreement registered in Snow License Manager. The agreement will be displayed in the list if either one or more SAP licenses are attached to the agreement, or information in the Contractor field contains "SAP". Click an agreement to open the agreement details.

16 REPORTS

In the **Reports** category you can view, export, share, and schedule reports.

16.1 ABOUT REPORTS

There is a wide range of stock reports available for asset management, such as **Potential software cost savings**, **Cost of unused applications per computer**, and **Computers without antivirus software installed**.

In the **Reports** category reports can be viewed, exported, shared, and scheduled. However, only the reports that the logged on user has the rights to see will be displayed. For management of roles, refer to the User Guide of Snow Management and Configuration Center.

16.2 REPORT TYPES

Snow License Manager provides a number of different types of reports:

Report type	Description
Stock report	A default report that comes with Snow License Manager.
User report	A report that has been modified by the user.
Shared report	A shared report can be based on any of the reports above. To view the report, the user with whom the report has been shared must have access right to see the base report.
Statistics report	Pie charts are based on statistics reports. Modified and saved reports will appear in the Report view.

16.3 REPORTS VIEW

The **Reports** view shows a list of all available reports in the system.

- The top section shows all user modified reports.
- The mid-section shows all custom reports.
- The bottom section shows all stock reports.

16.4 MANAGE REPORTS

This chapter describes how to view, export, share, and schedule reports in Snow License Manager.

To maximize performance and ensure you get the information you need, contents and filtering of existing reports can be modified in the SLM Web UI.

There are built-in standard reports, user modified standard reports, shared standard reports and customized reports. The different reports are symbolized with icons according to the following table.

Icon	Description
	Built-in standard report
	User-modified standard report The report is based on a built-in standard report and modified by a user. The report is only available to the user who created the report.
	Shared standard report The report is a user-modified standard report that is shared with other users. Note that the user with whom the report is shared must have access rights to the report that the modified report is based on.
	Customized report

16.4.1 SEARCH FOR A REPORT

Use **Find report** to search for a report. The search can be limited to one or several categories, and no wildcard character is required.

16.4.2 SHOW REPORT

To show the report contents:

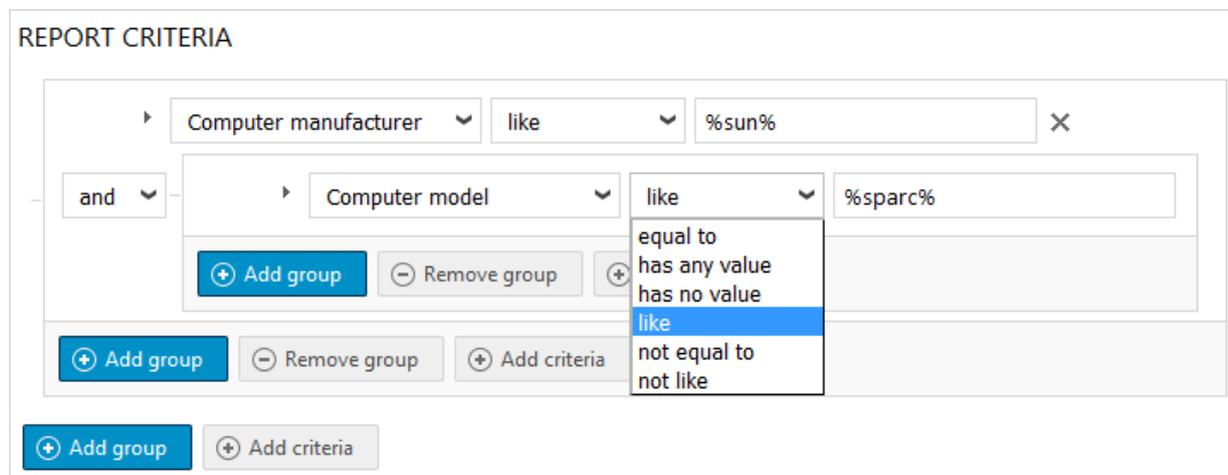
1. In the **All reports** view, click the name of the report.
The **Report detail** view appears.
2. Optionally, change the report criteria to create filters for the report according to [Change report criteria](#).
3. Click **Show report**.
The report is generated with the currently displayed report criteria.

16.4.2.1 CHANGE REPORT CRITERIA

Multiple criteria and groups can be added to create more advanced filters. The icons for adding and removing groups and criteria are shown in the following table.

Icon	Description
	Add a new group of criteria.
	Remove both the group and all criteria within that group.
	Add a new criterion, within or outside a group. You can also create nested criteria.
	Remove the specific criteria.
	Hide the report criteria.
	Show the report criteria.

For each report criterion, select an operator which tells the system how to compare the value. Use % as a wildcard character for values.



The report criteria can be set to default, reset, or removed according to the following table.

Click	To
Set default	Have the selected report criteria to be displayed as default for the specific report (available for both stock and custom reports). This ensures quick access to the information needed.
Reset	Reset the selected criteria to the default criteria. If no default criteria have been saved, all criteria will be cleared.
Clear	Remove all displayed criteria.

16.4.2.2 SAVE REPORT

To save a modified report:

1. In a **Report detail** view, on the context menu, click **Save report**.
The **Save report** dialog box appears.
2. Optionally, change the **Name** and **Description** for the report.
3. Select **Group name** from the list, or type a new group name.
4. To save this report as a new report, select the **Save as new** check box.
If the check box is left cleared, the existing report will be replaced by this report.
This check box is only available if the base report is a stock report.
5. Click **Save**.
The report will be available in the top section of the **Reports** view in the selected group or among the ungrouped reports.

16.4.2.3 DELETE REPORT

Note that users only can delete reports that they have created themselves (not Custom and Stock reports).

- In the **Reports** view, click the **Delete**  icon for the report to be deleted.

16.4.3 EXPORT REPORT TO FILE

A report can be exported to a file directly from the **Reports** view, which is especially useful when handling large reports. Also, reports can be exported from the **Report details** view.

A bonus when exporting to Microsoft Excel files (XLS/XLSX) is that standard Excel formulas for summaries, counts, etc. are used, instead of just showing the value.

NOTE

Excel has a limitation of maximum 256 arguments in a formula. So, for formulas with more than 256 arguments, the value will be shown in the export file.

1. In the **All reports** view, click the **Download**  icon next to the report to be exported. The **Export to file** dialog box appears.
2. Optionally, change the **Name** and **Description** of the report.
3. Select the **Type** of file to export to (CSV, PDF, XLS/XLSX, or XML) from the list.
4. Click **Save** to export the file.

16.4.3.1 SHOW EXPORTED REPORT FILES

To show a list of all exported files:

- In the **All reports** view, on the context menu, click **Report files**.

To download, change or delete the report file, perform the actions in the following table.

Click the icon	To
	Download the report file.
	Change the name and/or description of the export file.
	Delete the report file.

16.4.3.2 EXPORT FROM REPORT DETAILS VIEW

1. In the **All reports** view, click the name of the report to be viewed. The **Report detail** view appears.
2. Click **Show report**.
3. On the context menu, point to **Export** and then click the type of file to export to (CSV, PDF, XLS/XLSX, or XML).
The exported report is available as a downloaded file in the web browser.
4. Select to **Save** to export the file.

16.4.4 SCHEDULE REPORT FOR AUTOMATIC DELIVERY

Snow License Manager allows scheduling of reports for delivery by e-mail or to a server share. Sending reports to a server share enables automated export/import scenarios for third party systems relying on information from Snow License Manager. The report is produced as a file (CSV, PDF, XLS/XLSX, or XML), which is sent at a specified time.

1. In the **All reports** view, click the **Schedule**  icon next to the report to be scheduled. The **Schedule report** dialog box appears.
2. Optionally, change the **Name** and **Description** for the scheduled report.
3. Select **Type** of file (CSV, PDF, XLS/XLSX, or XML), **Recurrence**, and **Time** from the lists.
4. Select **Delivery** by e-mail or to disk, and type the e-mail address or server share path that the report should be sent to.
5. Select the **Active** check box to activate the scheduled report.
If the check box is cleared the report will not be generated and sent according to the schedule.
6. Click **Save** to save the schedule settings.

16.4.4.1 SHOW SCHEDULED REPORTS

To show a list of all scheduled reports:

- In the All reports view, on the context menu, click **Scheduled reports**.

To change or delete the scheduling, perform the actions in the following table.

Click the icon	To
	Change the scheduling settings for this report.
×	Delete the scheduling for this report.

16.4.5 SHARE REPORT

User modified reports (users' own saved reports) can be shared with other users. However, the user with whom the report is shared must have access rights to the report that the modified report is based on.

1. In the **All reports** view, click the name of the report to be shared.
2. On the context menu, click **Share report**.
The **Share report** dialog box appears.
3. Click the check boxes to select with whom the report will be shared, and then click **Save**.

16.4.6 SHOW RELATED DOCUMENTS

In reports linked to items that have document capabilities (Computers, Mobile devices, Users, Agreements, and Licenses) documents attached to the items can be downloaded as a compressed file (.zip).

1. In the **All reports** view, click the name of the report.
The **Report details** view appears.
2. Click **Show report**.
3. On the context menu, click **Show related documents**.
The **Documents** view appears.
4. To download one or more documents:
 - To download one document, click the **Download**  icon next to the document.

- To download several documents to a compressed file (zip), select the check boxes for the documents to be downloaded, and then click **Export** on the context menu.

16.4.7 GENERATE A MICROSOFT CIDC

The Clean Inventory Data Contract (CIDC) is an Excel file that consists of a set of tabs; on the first tab definitions and instructions are provided by Microsoft of how to handle the file, while the tabs that follow are intended to be completed with inventory data related to Microsoft products.

In Snow License Manager it is possible to export inventory data to pre-populate the Microsoft CIDC as an initial step for generating a CIDC. After the bulk part has been pre-populated, some additional manual input is required to verify and complete the CIDC.

Export of CIDC's requires a specific Report Security permission, which is set in Snow MACC.

16.4.7.1 EXPORT A CIDC

NOTE

- The CIDC must be in .xlsx format and is only available for export.
- The CIDC can only be generated in English.
- Export date will be automatically added to the CIDC file name.

To export a CIDC:

1. On the **Reports** menu, click **Reports**.
2. Expand the **Microsoft** report group or search for the report by typing search criteria in the **Find report** box.
3. Click the **Download**  icon to export the **Clean Inventory Data Contract (CIDC) – Excel export only**.
The **Export to file** dialog box appears. **Name** and **Type** is automatically set and cannot be changed.
4. To more easily identify the export file, type a **Description**.
5. Click **Save**.

16.4.7.2 OPEN THE CIDC

1. In the **Reports** view and on the context menu, click **Report files**.
All exported **Report files** are listed.
2. Find the CIDC in the list and click the **Download**  icon.
3. Select to open the report, or to save the report to disk.

16.4.7.3 VERIFY AND COMPLETE

The CIDC is populated with data from Snow License Manager, given that the requested information is stored in the database.

Any errors in the file are indicated by a red background and the prefix **[ERR:...]**.

Columns with values that need to be verified are indicated by a yellow background.

Columns destined for information that is not stored in Snow License Manager will be left empty, and need to be completed manually, if mandatory. In some cases, a default value will be set instead. The sections that follow describe these columns and values, and what actions the SAM administrator needs to take to complete the file.

NOTE

To correct and complete the CIDC, use the information provided in the *WorkSpace Domain Data - Definition Document* that can be found on the WorkSpace website.

A - HARDWARE AND OPERATING SYSTEMS

NOTE

The operating system **Install Date** is set to the installation date of the Snow client in the CIDC file.

Column	Default value	Action
Server Farm Name	Unknown	Needs to be set if applicable.
Physical Machine Fully Qualified Name	[name of physical machine] - or - <Unknown host>	Only computer name is retrieved from Snow License Manager. If a FQDN is required, it has to be completed manually. In case the name of a VM's physical host is missing (i.e. no inventory data of the host in SLM), <Unknown host> will be set.
Installation Media Channel	Unknown	Data needs to be manually entered.
OEM install confirmed via BIOS	No	Data needs to be verified and corrected if necessary.
License Quantity Required	1	Data needs to be verified and corrected if necessary.
Active SA Quantity Required	0	Data needs to be verified and corrected if necessary.
License Program Group Assigned	Unknown	Data needs to be manually entered.
License Model Assigned	Device	Data needs to be verified and corrected if necessary.
Environment Type	Production	Data needs to be verified and corrected if necessary.
External Connector Licensing Required	0	Data needs to be verified and corrected if necessary.
License Mobility Flag	0	Data needs to be verified and corrected if necessary.

B - CLIENT AND SERVER APPLICATIONS

NOTE

In case the application **Install Date** is missing, it will be set to **1980-01-01 00:00:00** in the CIDC file.

Column	Default value	Action
License Quantity Required	0 (no license required) - or - 1 (license required)	Based on application settings in Snow License Manager. Data needs to be verified and corrected if necessary.
Active SA Quantity Required	0	Data needs to be verified and corrected if necessary.
License Program Group Assigned	Unknown	Data needs to be manually entered.
License Model Assigned	One of the following: User Device User Access Device Access	The following mappings of metric and license model will be made: <ul style="list-style-type: none"> ▪ Total users -> User ▪ Total devices -> Device ▪ Concurrent user -> User Access ▪ Concurrent devices -> Device Access ▪ Installations -> Device Data needs to be verified and corrected if necessary.
Environment Type	Production	Data needs to be verified and corrected if necessary.
External Connector Licensing Required	0	Data needs to be verified and corrected if necessary.

C - ACCESS LICENSING

No information is retrieved from Snow License Manager. Instead, information needs to be manually collected and entered.

D - USER SUBSCRIPTION

No information is retrieved from Snow License Manager. Instead, information needs to be manually collected and entered.

E - VIRTUAL MACHINE MOVEMENT HISTORY

NOTE

This sheet displays movement history of virtual machines. Virtual machines that have never been moved will not show up here.

F - SQL SERVER INSTANCE

Column	Default value	Action
License Quantity Required	0 (no license required) - or - 1 (license required)	Based on application settings in Snow License Manager. Data needs to be verified and corrected if necessary.
Active SA Quantity Required	0	Data needs to be verified and corrected if necessary.
License Program Group Assigned	Unknown	Data needs to be manually entered.
License Model Assigned	One of the following: User Device User Access Device Access	The following mappings of metric and license model will be made: <ul style="list-style-type: none"> ▪ Total users -> User ▪ Total devices -> Device ▪ Concurrent user -> User Access ▪ Concurrent devices -> Device Access ▪ Installations -> Device Data needs to be verified and corrected if necessary.
Environment Type	Production	Data needs to be verified and corrected if necessary.
External Connector Licensing Required	0	Data needs to be verified and corrected if necessary.

G - GENERAL INFORMATION

Information that cannot be retrieved from Snow License Manager is indicated by an empty column and a yellow background. Information in these columns needs to be manually entered.

17 IMPORT DATA

Import data is a wizard-based feature for data import. Depending on type of import, either new objects are created or existing objects are updated with new metadata.

To import new or updated information, use an Excel (XLS or XLSX) or a CSV (Comma Separated Values) file with the import data. Information can be imported to the pre-defined fields and to most custom fields applicable to the category (except from custom fields of type currency).

NOTE

Available import types depend on what access rights the logged on user has.

There is a dedicated wizard for each type of import/update. The wizards guide you through the steps of the import/update. The procedure is described in the [Run import](#) and consists of the following steps:

1. Upload a data source.
2. Import settings.
3. Field mappings.
4. Preview of imported data.
5. Import.

Import of Microsoft License Statement MLS files is described in [Microsoft License Statement \(MLS\) file import](#).

17.1 INTRODUCTION

To import a file, the file has to be validated and the column names of the import source file need to be mapped to the corresponding fields in Snow License Manager.

17.1.1 IMPORT FILE

The import source file can be in Excel (.xls or .xlsx) or CSV format, and both source files with or without file headers can be used. Note that CSV files need to be encoded as UTF-8.

To download templates for importing data to Snow License Manager:

1. On the **Home** menu, click **Import data**.
The **Import data** view appears.
2. Click **Import templates**.
The **Import templates** dialog box appears.
3. Select one import template from the list and then click **Download**.
The template is downloaded.

NOTE

If the source file has a header, the column names of the file does not have to be the same as the destination field names in Snow License Manager.

For a successful import of new or updated information in Snow License Manager certain information must be provided. For more detailed information on required import data, and where

the data can be found in Snow License Manager after the import, see the document *Data Import Field Description*.

17.1.2 VALIDATION OF DATA

To verify that only allowed data types and values are included in the import source file, the **Import data** function validates the data before it is imported. In the preview step of the import, errors are high-lighted in red. Point to the field to see more information on the error.

Errors and conflicts that are high-lighted in red prevent import/update of data.

Data can only be updated for an object that already exists in Snow License Manager. If the import data does not match an object in the database, it is not possible to continue with the update of that particular object.

17.1.3 FIELD MAPPINGS

In the **Field mappings** step of the import, the column names of the import source file need to be mapped to the corresponding fields in Snow License Manager. If the import source file has no header, index mapping can be used instead. This means that the fields of the import source file will be identified by index (column position 0, 1, 2, etc.) instead of text (column header).

17.2 RUN IMPORT

1. On the **Home** menu, click **Import data**.
The **Import data** view appears.
2. Click selected import type to start the import wizard.

17.2.1 UPLOAD A DATA SOURCE

1. Click **Browse** and select the import source file.
2. If the import source file is a CSV file, select used **Delimiter** from the list. Otherwise, leave the default value.
3. Click **Next**.

17.2.2 IMPORT SETTINGS

1. Manage settings for the data import according to the following sections. Available import settings depend on type of import/update.
2. Click **Next**.

17.2.2.1 SETTINGS FOR ALL IMPORTS/UPDATES

In the **New organization action** list, select how to handle organizations that exist in the import source file but not in the Snow License Manager database. The options are described in the following table.

Options for New organization action	Description
Do nothing	Unknown organizations will be ignored. However, information on organization is required for a successful import. The field will be highlighted in the Preview step and it will not be possible to import data for that particular row.
Create	The system will create the new organization node, either directly under the root (for example: ROOT/[new organization node]) or according to the path in the import source file (for example: ROOT/IT/[new organization node]).

17.2.2.2 LICENSE IMPORT SETTINGS

In the **Identity mapping** section, select which identity field to use when a license is mapped to an application:

- SKU (Stock-keeping unit)
- Application Name
- Application Part number

17.2.2.3 COMPUTER UPDATE SETTINGS

In the **Obsolete computer action** list, select how to handle computers that exist in the Snow License Manager database but not in the import source file. The options are described in the following table.

Options for Obsolete computer action	Description
Do nothing	Nothing will happen to the obsolete computers.
Inactivate	All obsolete computers will be inactivated during the import. An inactive computer does not require licenses for its installed applications and is not included in the compliance calculations.
Archive	All obsolete computers will be archived during the import. An archived computer is removed and all licenses currently attached to it are released.
Delete	All obsolete computers will be deleted during the import. A deleted computer is removed from the system; all computer details are deleted and all attachments to users, agreements, licenses, etc. are released.

WARNING

A computer that has been archived or deleted during import cannot be restored. If you have an import file that does not include all the computers in the database, only select **Archive** or **Delete** if you really want to remove them from the system.

NOTE

It is possible to limit the obsolete computer action to certain computers in the database by a configuration setting in Snow MACC.

17.2.2.4 CUSTOM OBJECT UPDATE SETTINGS

In the **Object type** list, specify the object type that will be updated. Depending on object type, different destination fields will be available in the **Field mappings**.

17.2.2.5 LICENSE ASSIGNMENT IMPORT SETTINGS

In the **Assignment action** list, select to add to existing assignments on a license, or to replace them completely.

17.2.3 FIELD MAPPINGS

Map the column headers of the import **Source** file to the corresponding **Destination** fields in Snow License Manager. Mandatory fields are marked with an asterisk * and must be included in the import source file. The fields to be mapped depend on type of import/update.

If the source file has no header, **Map by index** can be used instead.

17.2.3.1 MAP AND CONFIGURE IDENTIFIERS

In order for updated information to be mapped to the correct items, an identifier must be selected. Depending on how the import file looks like, select to identify by using the file header or to map by index.

To map and configure identifiers:

1. To map by index, select the **Map by index** check box.
2. In the **Map identifiers** destination list to the right, select identifier.
3. In the **Map identifiers** source list to the left, select column header or column position where information on selected identifier is found.
4. To remove any spaces in the beginning or the end of a data value, select the **Trim leading or trailing white space** check box.

17.2.3.2 MAP AND CONFIGURE FIELD MAPPING OPTIONS

1. To configure a field mapping, click the **Mapping**  icon to the right of the field name. A dialog box appears.
2. To remove any spaces in the beginning or the end of a data value, select the **Trim leading or trailing white space** check box.
3. To map by index, select the **Map by index** check box.
4. Type a **Default value** to be imported if there is no value in the source field.
5. Optionally, type a **Prefix** (text and/or number) to be added in front of all imported values. This can be used for separating objects from different sites. For example, type "SE_" to be added in front of all computers located in site Sweden.
6. For update of existing items an option is included for any existing custom fields. In the **Empty value action** list, select how the system shall handle an empty field in the source file when updating the database:
 - **Do not update** - The database will not be updated.
 - **Remove value** - The database will be updated with the empty (blank) value.

NOTE

If a Default value has been defined, see above, the Empty value action will not apply.

7. Click **Save**. The **Mapping** icon to the right of the field name is replaced by an exclamation mark  indicating that settings have been made.
8. In the **Source** list, select column header or column position where information on selected **Destination** field is found.
9. Repeat the previous steps for every field mapping.
10. Click **Next**.

17.2.4 PREVIEW OF IMPORTED DATA

In the **Preview of imported data**, errors, missing information and data that differs from what is expected are color highlighted, according to the following table.

Color of field	Description
Yellow	<p>If the Incomplete licenses functionality is activated (which is done in Snow MACC), fields that are missing the required information are highlighted in yellow.</p> <p>For License import, the import also verifies that the Stock-keeping unit (SKU) matches the entered license settings. If import data does not match the expected metric, there will be a warning. You may want to change the unexpected value in your source file before you continue with the import. It is possible to continue with the import even without changing, but please note that there will be a mismatch in the database if you do.</p>
Red	<p>Errors like conflicts or invalid values are highlighted in red. Rows that have any fields highlighted in red will not be imported.</p>

It is possible to continue with the import/update even if there are invalid rows. However, only rows that are not highlighted or highlighted in yellow will be imported.

To preview the data:

1. To see more information about a highlighted field, point to the field.
2. To export the entire preview to an Excel file, click **Export all rows**.
3. To export only rows with errors, click **Export invalid rows** Descriptions of the errors/warnings will be included in the file. This may help you to correctly create the source file, with the right fields and content.
4. To go back and correct field mappings and import settings, click **Previous**.
5. To start the import, click **Next**.

17.2.5 IMPORT

The progress of the import is displayed.

- When completed, click **Finish**.

17.3 MICROSOFT LICENSE STATEMENT (MLS) FILE IMPORT

Snow License Manager can import Microsoft License Statement (MLS) files. The file must be in .xlsx format, and in its original state (unaltered). The MLS import will import agreements and licenses, and map licenses to applications in SLM using the SKU (Stock-keeping Unit) repository. Moreover, the import will apply product use rights information where possible.

License information is imported from the **License Agreement** and the **Transaction Data** tabs of the MLS file. The columns that are used for import are described in the user guide *Data Import Field Description*.

17.3.1 RUN IMPORT

1. On the **Home** menu, click **Import data**.
The **Import data** view appears.
2. Click **MLS import** to start the import wizard.
3. Click **Browse** and select the import source file, and then click **Next**.
4. Change the MLS import settings:
 - a. To use an organization alias when linking the agreements or licenses to organization nodes, select the **Use organization alias for agreements** and/or **Use organization alias for licenses** check boxes.

NOTE

There has to be an alias, case sensitive, for each company name appearing in the **Customer Name on Agreement** column on the tab **License Agreements** of the MLS file. Aliases are created when adding/editing an organization node in Snow Management and Configuration Center.

- b. To include incomplete licenses in the import, select the **Import incomplete licenses** check box.
 - c. Click **Next**.
5. Verify the agreements, and then click **Next**.
6. Verify the licenses, and then click **Next** to start the import.
7. Click **Finish** when the import is complete.

18 APPENDIX A - COMPLIANCE EXAMPLES

18.1 COMPLIANCE EXAMPLE 1

The following example refers to the application **WinRAR archiver 5.30**.

In the compliance summary of the application we see that:

- The metric of the application is set to **Installations**
- There are **10** licenses with that metric for this application
- There is a license requirement of **18** licenses
- There are **10** licenses available for coverage
- We are **8** licenses short

In the **Details** view of the **Compliance** tab, we see that there are no licenses registered for the metric of the application (top red box), but there are licenses registered with another metric (bottom red box):

- There are **4** licenses registered with the metric **Number of processors**. However, these licenses have not been assigned to any computer/datacenter and are not used for coverage.

18.1.1 DEFAULT METRIC

The metric of this application is set to **Installations**.

The initial license requirement of the application is **18 Installations**, which corresponds to **18 Required licenses**. No adjustments have been made.

WinRAR archiver 5.30
Alexander Roshal WinRAR Microsoft Windows Edit application

Installations
18

Licenses
10

License requirement
18

Coverage
10

Compliance
-8

Licenses Allocation **Compliance** Computers Users Information Financial info SKU

Details History Trend

Initial requirement	Licenses	Required licenses	Coverage	Compliance
18 Installations	10 Licenses	18 Required licenses	10 Coverage	-8 You are not compliant
	Licenses purchased: 0 Transfers received via upgrade rights: 10	Installations: 18	Licenses: 10	
	Licenses: 10	Required licenses: 18	Coverage: 10	Compliance: -8

Processors	Licenses	Coverage
18	0	0
	Licenses purchased: 4 Unassigned: -4	Licenses: 0
	Licenses: 0	Coverage: 0

In the **Licenses** column we see that 10 licenses have been transferred to the application via upgrade rights. For more information:

- Click the **Licenses** tab, and then click **Transfers**.

Licenses Allocation Compliance **Computers** Users Information Financial info SKU

Purchases **Transfers** Tracking

Application name	Transfer type	Metric	Quantity
WinRAR archiver 5.00	Received via upgrade rights	Installations	2
WinRAR archiver 5.10	Received via upgrade rights	Installations	8

To see how these licenses are covering the installations:

- On the **Licenses** tab, click **Tracking**.
- Select **Covered** in the **Entitlement state** list.
The list is filtered.

In this example we see that the list is empty (no consumers are covered), although we have 10 licenses available for coverage.

Licenses Allocation Compliance Computers Users Information Financial info SKU

Purchases Transfers **Tracking**

Consumer name	Type	Used	Required	Entitlement state
	= (All)	= (All)	=	= Covered

To investigate more, click the **Allocation** tab.

NOTE

Allocation can only be changed according to the current licensing conditions.

Now we see that the organization node **Company** has no license requirement, but is covered by 10 licenses. At the same time, the organization node **Company/Sweden** has a requirement of 18 licenses but no licenses available for coverage.

Organisation	Metric	License requirement	Coverage	Compliance
Company	Installations	0	10	10
Company/Sweden	Installations	18	0	-18

Here we might want to edit the license purchase to make it possible for the licenses to cover installations of the application further down in the organization structure:

1. Navigate to the license purchase and click **Edit license**.
2. On the **Assignment** tab, select the **Auto allocate** check box, and then click **Save**.
3. Click **Recalculate compliance** in the context menu.
4. Navigate to the application, and then click the **Allocation** tab.

In this case we changed one of the license purchases, so now 8 of the available licenses can be used for covering consumers in the **Company/Sweden** node.

Organisation	Metric	License requirement	Coverage	Compliance
Company	Installations	0	2	2
Company/Sweden	Installations	18	8	-10

To see how the licenses are covering the installations after the change:

1. Click the **Licenses** tab, and then click **Tracking**.
2. Select **Covered** from the **Entitlement state** list.
The list is filtered.

Consumer name	Type	Used	Required	Entitlement state
XXL7JL8ZW1	Computer	<input checked="" type="checkbox"/>	1	Covered
XXL9JPJV1	Computer	<input checked="" type="checkbox"/>	1	Covered
XXL3BL8PX1	Computer	<input type="checkbox"/>	1	Covered
SELTSER1503	Computer	<input checked="" type="checkbox"/>	1	Covered
SELTSER1502	Computer	<input type="checkbox"/>	1	Covered
WBRAALEXSAULT	Computer	<input type="checkbox"/>	1	Covered
SELTSER1506	Computer	<input checked="" type="checkbox"/>	1	Covered
8 items				

Note that we are still 8 licenses short according to the overall compliance calculation, and that we have 4 unassigned licenses with the metric **Number of processors**.

Initial requirement	Licenses	Required licenses	Coverage	Compliance
18 Installations	10 Licenses	18 Required licenses	10 Coverage	-8 You are not compliant
	Licenses purchased 0	Installations 18	Licenses 10	
	Transfers received via upgrade rights 10			
	Licenses 10	Required licenses 18	Coverage 10	Compliance -8
18 Processors	0 Licenses		0 Coverage	
	Licenses purchased 4		Licenses 0	
	Unassigned -4			
	Licenses 0		Coverage 0	

18.1.2 OTHER METRICS

On the **Compliance** tab and in the **Details** view, we see that licenses with another metric than the application's metric have been registered. However, these licenses have not been assigned to any computer/datacenter and are not used for coverage.

To correct the unassigned licenses:

1. Navigate to the license with the **Number of processors** metric, and click **Edit license**.
2. Click the **Assignment** tab.
3. Click **Add** and search for the computers that you want to assign the licenses to.
4. Type number of licenses to be assigned for each computer.
5. Save the changes to the license.
6. Click **Recalculate compliance** in the context menu.
7. Navigate to the application, and then click the **Compliance** tab.

In this example the computers that we assigned the licenses to have 1 processor each. This means that the 4 licenses correspond to 4 installations which they now cover. This is shown in the **Coverage** column where we in the top section now have a row for **Covered by other metrics**, and in the second section a row for **Licensing other metrics**.

WinRAR archiver 5.30

Alexander Roshal WinRAR Microsoft Windows

Edit application

Installations

18

Licenses

10

License requirement

18

Coverage

14

Compliance

-4

Licenses
Allocation
Compliance
Computers
Users
Information
Financial info
SKU

Details History Trend

Initial requirement	Licenses	Required licenses	Coverage	Compliance
18 Installations	10 Licenses	18 Required licenses	14 Coverage	-4 You are not compliant
	Licenses purchased	0	Installations	18
	Transfers received via upgrade rights	10	Covered by other metrics	4
	Licenses	10	Required licenses	18
			Coverage	14
			Compliance	-4
18 Processors	4 Licenses		0 Coverage	
	Licenses purchased	4	Licenses	4
			Licensing other metrics	-4
	Licenses	4	Coverage	0

18.2 COMPLIANCE EXAMPLE 2

In the compliance summary of the application **Microsoft SQL Server 2012 Enterprise** we see that:

- The metric of the application is set to **Cores**
- There are **0** licenses with that metric for this application
- There is a license requirement of **24** licenses
- There are **0** licenses available for coverage
- We are **24** licenses short

Microsoft SQL Server 2012 Enterprise
 Microsoft Corporation Microsoft SQL Server Microsoft Windows

Edit application

Cores
24

Licenses
0

License requirement
24

Coverage
0

Compliance
-24

Licenses Allocation Compliance Computers Users Bundle content Information Financial info SKU

[Details](#)
[History](#)
[Trend](#)

Initial requirement	Licenses	Required licenses	Coverage	Compliance
24 Cores	0 Licenses	24 Required licenses	0 Coverage	-24 You are not compliant
	Licenses purchased	0 Cores	24 Licenses	0
	Licenses	0 Required licenses	24 Coverage	0 Compliance

18.2.1 DEFAULT METRIC

The metric of this application is set to **Cores**.

The application is detected on hardware that has a total number of **24 Cores**, which corresponds to **24 Required licenses**. No adjustments have been made.

Microsoft SQL Server 2012 Enterprise
 Microsoft Corporation Microsoft SQL Server Microsoft Windows

Edit application

Cores
24

Licenses
0

License requirement
24

Coverage
0

Compliance
-24

Licenses Allocation Compliance Computers Users Bundle content Information Financial info SKU

[Details](#)
[History](#)
[Trend](#)

Initial requirement	Licenses	Required licenses	Coverage	Compliance
24 Cores	0 Licenses	24 Required licenses	0 Coverage	-24 You are not compliant
	Licenses purchased	0 Cores	24 Licenses	0
	Licenses	0 Required licenses	24 Coverage	0 Compliance

To verify that no consumers are covered:

1. Click the **Licenses** tab, and then click **Tracking**.
A list of all consumers that require a license is shown.
2. There are six consumers and none of them is covered.

Consumer name	Type	Used	Required	Entitlement state
SE1Q208	Computer	<input type="checkbox"/>	4	Not covered
SE1Q209	Computer	<input type="checkbox"/>	4	Not covered
SE1Q210	Computer	<input type="checkbox"/>	4	Not covered
SE1E750	Computer	<input type="checkbox"/>	4	Not covered
SE1E751	Computer	<input type="checkbox"/>	4	Not covered
SE1A8EN100	Computer	<input type="checkbox"/>	4	Not covered

18.2.2 DECIDE ON LICENSING

Take in consideration how the consumers are set up and decide how to license them in the best way.

As support, use the report **License tracking per computer**, and add the columns **Datacenter name** and **Host computer name** from the Column selector.

In this example, we have three physical hosts.

License tracking per computer
Shows license tracking per computer

REPORT CRITERIA Show report Clear Set default

Drag a column header here to group by that column

Computer name	Legal organisation	Datacenter name	Host computer name	Application name	Manufacturer	Metric	Assignment type	Coverage reason
SE1E750	Company		SE1E750	Microsoft SQL Server 2012 Enterprise	Microsoft Corporation	Number of processor cores		None
SE1E751	Company		SE1E751	Microsoft SQL Server 2012 Enterprise	Microsoft Corporation	Number of processor cores		None
SE1Q208	Company	VMW Datacenter 1	SE1A8D0701	Microsoft SQL Server 2012 Enterprise	Microsoft Corporation	Number of processor cores		None
SE1Q209	Company	VMW Datacenter 1	SE1A8D0701	Microsoft SQL Server 2012 Enterprise	Microsoft Corporation	Number of processor cores		None
SE1Q210	Company	VMW Datacenter 1	SE1A8D0701	Microsoft SQL Server 2012 Enterprise	Microsoft Corporation	Number of processor cores		None
SE1A8EN100	Company	SE1E751	SE1E751	Microsoft SQL Server 2012 Enterprise	Microsoft Corporation	Number of processor cores		None

We decide to cover two of the physical hosts with VM use rights. We buy and register a license for Microsoft SQL Server 2014 Enterprise Core with:

- quantity **120** and metric **Number of processor cores**
- upgrade rights
- downgrade rights
- cross edition rights
- VM use rights

When registering the license purchase we assign licenses to the two physical hosts according to their requirement of licensable cores.

Name	Organisation	Type	Processors / Cores	VMs (Inventoried)	VM use rights	Assigned
SEVANHC001	Company	Physical	1 / 6	14 (14)	Unlimited	6
SEVMS0	Company	Physical	2 / 4	4 (4)	Unlimited	8

After compliance has been calculated, we see that the application **Microsoft SQL Server 2012 Enterprise** now has a coverage due to **VM** use rights.

Microsoft SQL Server 2012 Enterprise

Microsoft Corporation Microsoft SQL Server Microsoft Windows

120 Total licenses 14 Total assigned 106 Total remaining

Cores: 24 Licenses: 0 License requirement: 24 Coverage: 0 Compliance: -24

Licenses Allocation Compliance Computers Users Bundle content Information Financial info SKU

Details History Trend

Initial requirement	Licenses	Required licenses	Coverage	Compliance
24 Cores	0 Licenses	24 Required licenses	0 Coverage	-24 You are not compliant
	Licenses purchased 0	Cores 24	Licenses 0	
	Licenses 0	Required licenses 24	Coverage 0	Compliance -24

To verify that consumers are now covered:

1. Click the **Licenses** tab, and then click **Tracking**.
A list of all consumers that require a license is shown.
2. Five out of the six consumers are now covered.

Licenses Allocation Compliance Computers Users Bundle content Information Financial info SKU

Purchases Transfers Tracking

Consumer name	Type	Used	Required	Entitlement state
SEVMS0	Computer	<input type="checkbox"/>	4	Covered
SEVMS0	Computer	<input type="checkbox"/>	4	Covered
SEVMS0	Computer	<input type="checkbox"/>	4	Covered
SEVMS0	Computer	<input type="checkbox"/>	4	Covered
SEVMS0	Computer	<input type="checkbox"/>	4	Covered
SEVANHC001	Computer	<input type="checkbox"/>	4	Not covered

18.3 COMPLIANCE EXAMPLE 3

The following example refers to the application **Microsoft SQL Server 2012 Standard**.

In the compliance summary of the application (blue box) we see that:

- The metric of the application is set to **Number of processor cores**.

- There are no (**0**) licenses with that metric for this application.
- There is a license requirement of **44** licenses.
- There are **44** licenses that have been used for coverage.
- We are **compliant**.

Microsoft SQL Server 2012 Standard
 Microsoft Corporation Microsoft SQL Server Microsoft Windows Edit application

Cores
35

Licenses
0

License requirement
44

Coverage
44

Compliance
0

Licenses Allocation **Compliance** Computers Users Bundle content Information Financial info SKU

Details History Trend

Initial requirement	Licenses	Required licenses	Coverage	Compliance
35 Cores	0 Licenses	44 Required licenses	44 Coverage	0 You are compliant
	Licenses purchased	0		
		Extended coverage for hosts	-4	Covered by other metrics
		Minimum requirement	9	
		Core factor adjustment	4	
	Licenses	0	Required licenses	44
			Coverage	44
			Compliance	0
12 Installations	83 Licenses		76 Coverage	
	Licenses purchased	93		
	Transfers given via downgrade rights	-10		
	Licenses	83	Coverage	76
12 Processors	4 Licenses		0 Coverage	
	Licenses purchased	4		
	Licenses	4	Licenses	4
			Licensing other metrics	-4
	Licenses	4	Coverage	0

In the **Details** view of the **Compliance** tab, we see that there are no licenses registered for the metric of the application (top red box), but there are licenses registered with other metrics (bottom red boxes):

- There are **93** licenses registered with the metric **Installations**.
The initial requirement of **35** cores corresponds to **12** installations.
- There are **4** licenses registered with the metric **Number or processors**.
The initial requirement of **35** cores corresponds to **12** processors.

18.3.1 DEFAULT METRIC

The initial license requirement of the application is **35 Cores**. However, adjustments need to be made for **Extended coverage**, **Minimum requirement**, and **Core factor** which results in a final requirement of **44 Required licenses**.

Initial requirement	Licenses	Required licenses	Coverage	Compliance
35 Cores	0 Licenses	44 Required licenses	44 Coverage	0 You are compliant
	Licenses purchased	0	Cores	35
		Extended coverage for hosts	-4	Covered by other metrics
		Minimum requirement	9	
		Core factor adjustment	4	
	Licenses	0	Required licenses	44
			Coverage	44
				Compliance
				0
12 Installations	83 Licenses		76 Coverage	
	Licenses purchased	93	Licenses	83
	Transfers given via downgrade rights	-10	Licensing other metrics	-7
	Licenses	83	Coverage	76
12 Processors	4 Licenses		0 Coverage	
	Licenses purchased	4	Licenses	4
			Licensing other metrics	-4
	Licenses	4	Coverage	0

For information on the consumers of this application:

- Click the **Licenses** tab, and then click **Tracking**. A list of all consumers that require a license is shown.

18.3.1.1 ADJUSTMENT FOR EXTENDED COVERAGE

Adjustment has been made for a host that is configured with extended coverage for this application. In the **Tracking** view, the involved consumer has **Entitlement state** set to **No requirement**.

For detailed information:

- On the **Licenses** tab and in the **Tracking** view, click the arrow next to the **Required** number of licenses (in this example **0**).
- In the **License requirements** box, any adjustments are shown.

18.3.1.2 ADJUSTMENT FOR MINIMUM REQUIREMENT

The setting **Minimum number of licenses** means that each consumer of the application must be covered with a certain number of licenses. When this setting is used, the set value is shown on the **Information** tab in application details.

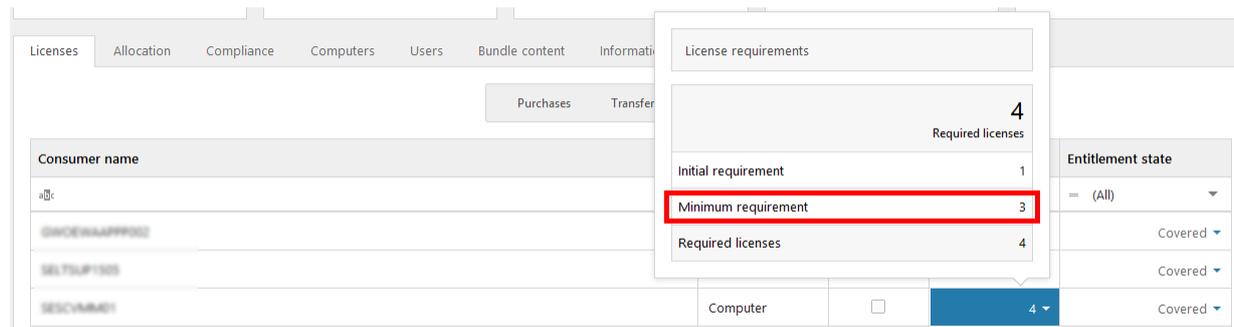
Type	Name	Value
	Metering history period	28/02/2015 - 28/02/2016
	Metric	Based on total processor cores
	Minimum number of licenses	4

EXAMPLE

Minimum number of licenses is set to 4. For a consumer with 4 cores no adjustment is needed. For a consumer with only 1 core, an additional adjustment of 3 cores is needed.

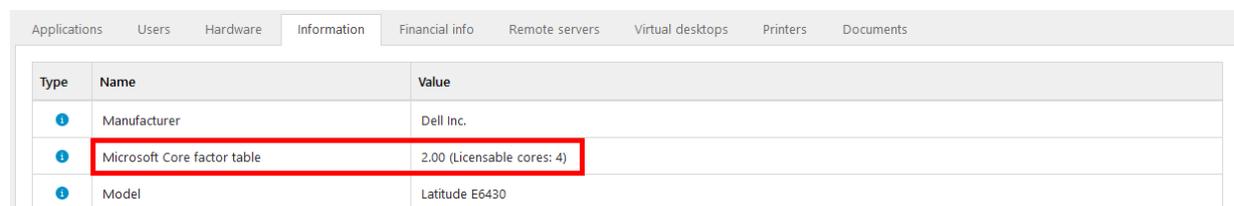
For information on any adjustments that have been made for a consumer:

1. On the **Licenses** tab and in the **Tracking** view, click the arrow next to the number of **Required** licenses.
2. In the **License requirements** box, any adjustments are shown.



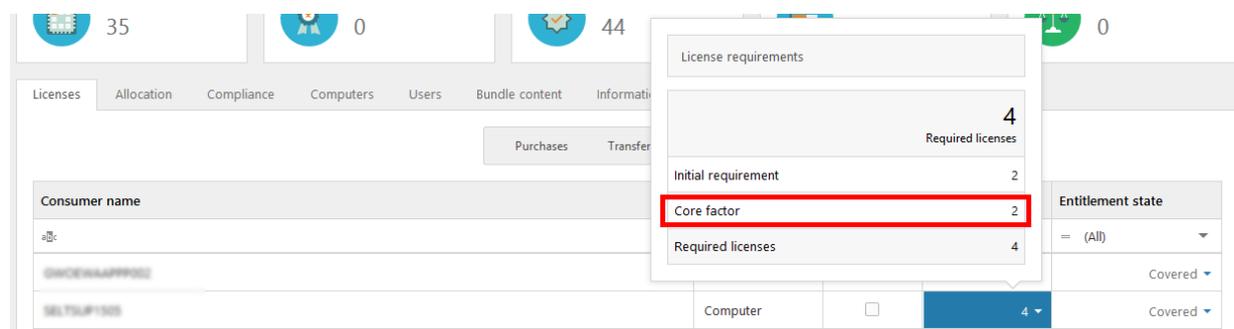
18.3.1.3 ADJUSTMENT FOR CORE FACTOR

When a Core factor table is applied, information on used table and factor is shown on the **Information** tab in computer details.



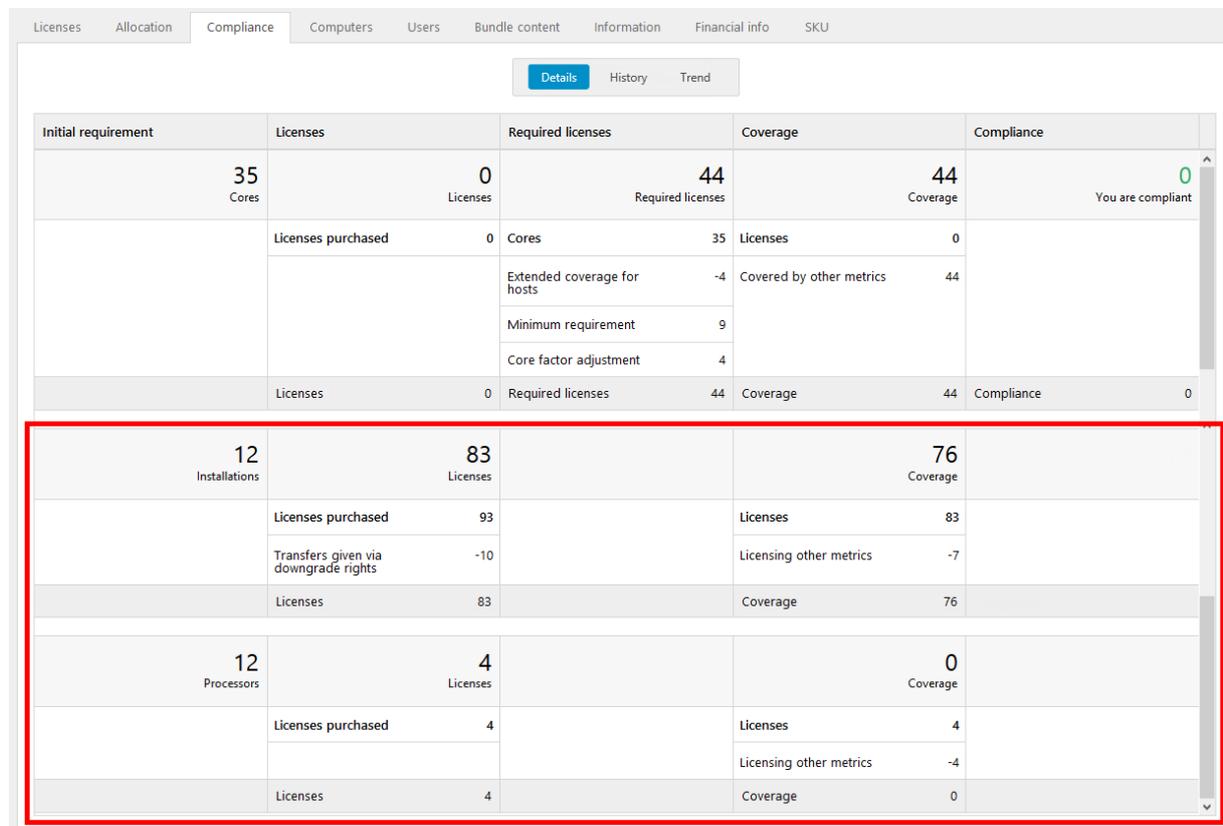
For information on any applied core factor for a consumer:

1. On the **Licenses** tab and in the **Tracking** view, click the arrow next to the number of **Required** licenses.
2. In the **License requirements** box, any adjustments are shown.



18.3.2 OTHER METRICS

On the **Compliance** tab and in the **Details** view, we see that license purchases with other metrics than the application's metric have been registered, and are shown in the subsequent sections.



Initial requirement	Licenses	Required licenses	Coverage	Compliance
35 Cores	0 Licenses	44 Required licenses	44 Coverage	0 You are compliant
	Licenses purchased	0 Cores	35 Licenses	0
		Extended coverage for hosts	-4 Covered by other metrics	44
		Minimum requirement	9	
		Core factor adjustment	4	
	Licenses	0 Required licenses	44 Coverage	44 Compliance
12 Installations	83 Licenses		76 Coverage	
	Licenses purchased	93	Licenses	83
	Transfers given via downgrade rights	-10	Licensing other metrics	-7
	Licenses	83	Coverage	76
12 Processors	4 Licenses		0 Coverage	
	Licenses purchased	4	Licenses	4
			Licensing other metrics	-4
	Licenses	4	Coverage	0

Out of the 93 purchased licenses with the metric **Installations**, 10 have been transferred to other versions of the application via downgrade rights. For information on which versions, click the **Licenses** tab, and then click **Transfers**.

The remaining 83 licenses with the metric **Installations** are available for coverage.

Since the metric of the application is set to **Number of processor cores** each license of another metric must be translated into the metric of the application.

In this example 7 of the **Installations** licenses and 4 of the **Processors** licenses are translated into a corresponding 44 **Cores** licenses, and are used for coverage of the application. This is indicated by the **Licensing other metrics** row in each section of the other metrics, and the **Covered by other metrics** row in the default metric section.

18.4 COMPLIANCE EXAMPLE 4

This example displays where compliance exclusions are displayed in other areas of Snow License Manager than [Administration overview](#)

Windows Server 2008 R2 Standard
Microsoft Corporation Windows Server

Installations: 5, Licenses: 0, License requirement: 0, Coverage: 0, Compliance: 0

Compliance tab selected.

Initial requirement	Licenses	Required licenses	Coverage	Compliance
5 Installations	0 Licenses	0 Required licenses	0 Coverage	0 You are compliant
	Licenses purchased: 0	Installations: 5	Licenses: 0	
		Manual exclusions: -5		
	Licenses: 0	Required licenses: 0	Coverage: 0	Compliance: 0

Displaying an application with the **Compliance** tab selected shows compliance exclusions.

Windows Server 2016 Standard
Microsoft Corporation Windows Server

Cores: 95, Licenses: 0, License requirement: 240, Coverage: 0, Compliance: -240

Applications tab selected.

Consumer name	Type	Used	Required	Entitlement state
[blurred]	Computer	<input type="checkbox"/>	0	No requirement
[blurred]	Computer	<input type="checkbox"/>	16	Not covered
[blurred]	Computer	<input type="checkbox"/>	16	Not covered
[blurred]	Computer	<input type="checkbox"/>	0	No requirement
[blurred]	Computer	<input type="checkbox"/>	16	Not covered
[blurred]	Computer	<input type="checkbox"/>	16	Not covered
[blurred]	Computer	<input type="checkbox"/>	16	Not covered
[blurred]	Computer	<input type="checkbox"/>	16	Not covered
[blurred]	Computer	<input type="checkbox"/>	0	No requirement

18 items

Displaying an application with the **Applications** tab selected shows compliance exclusions where the Entitlement state is **No requirement**.

Name	Metric	First discovered	Last used	Requirement	Entitlement state	Remark
⊞	(All)				(All)	
TS-7-Zip 17 Beta	No license required		27/09/2017			
TS-Google Chrome 59	No license required		07/08/2017			
TS-Google Chrome 60	No license required		26/09/2017			
TS-Google Chrome 61	No license required		28/09/2017			
TS-Microsoft Internet Explorer 11	No license required		28/09/2017			
TS-Notepad++ 7	No license required		28/09/2017			
TS-TreeSize 3 Free	No license required		11/08/2017			
TS-VMware Tools 10	No license required		28/09/2017			
VMware Tools 10	No license required					
Windows Media Player 12	No license required					
Windows Server 2012 R2 Standard	Number of processors			0	No requirement	EXC
Zenmap 7	No license required					
29 Items						

Displaying details of a computer with the **Applications** tab selected will display the remark "EXC" if compliance is excluded.

18.4.1 COMPLIANCE EXCLUSIONS IN REPORTS

The following reports are related to the compliance exclusion functionality that is introduced with Snow License Manager 9:

- Compliance exclusions**
 Displays the computer name and excluded application, among other examples. The **Reason** column displays the reason for the exclusion.
- Compliance summary**
 Displays a compliance summary for applications.
- License tracking per computer**
 Displays license tracking per computer. By adding the column named **Requirement adjustment reasons**, "Manual exclusions" is displayed where compliance exclusion is used.
- Windows Server Assessment - 2012 licensing**
- Windows Server Assessment - 2016 licensing**
- Windows Server Assessment - 2019 licensing**
- Windows Server Assessment - Lowest-cost licensing**
 These four Windows Server Assessment reports can have the column named **Excluded Windows Server VMs** added, which displays the number of Windows Server VMs that are excluded.

For the **Compliance summary** report, an example use is to add the columns "Manual exclusions" and "Requirement adjustment reasons," which displays the number of manual exclusions for a specific application, and the reasons for this.

Compliance summary

Shows compliance summary for software products.

Column selector

REPORT CRITERIA

Show report Clear Reset

Add group Add criteria

Drag a column header here to group by that column

Application	Manufacturer	Total licenses	License requirement	Available Licenses	Coverage	Compliance	Manual exclusions	Requirement adjustment reasons	Total license cost (EUR)
windows sen									
Windows Server 2012 R2 Standard	Microsoft Corporation	0	0	0	0	0	-32	Minimum requirement, Manual exclusions	0.00

19 APPENDIX B - ACTION LOG

The **Action log** view shows information on changes in the system, for example added or removed licenses, deleted items, or other critical changes.

The following table shows examples of changes that are logged. The changes are grouped by category in the table. Note that the table does not show all changes that are logged.

Category	Logged change
Agreements	<p>Agreement or sub-agreement was deleted.</p> <p>Deletion of an agreement or sub-agreement failed.</p> <p>Agreement was added through an MLS import.</p> <p>Agreement was deleted, added, or updated, or failed to be deleted through an MLS import.</p> <p>Agreement was attached to master agreement.</p> <p>Agreement was detached from master agreement.</p>
Applications	<p>Blacklist criteria was added or deleted.</p> <p>Whitelist criteria was added or deleted.</p> <p>Whitelist automation rule for installations was changed or inactivated.</p> <p>Whitelist automation rule for users was changed or inactivated.</p> <p>Whitelist automation rule for licensed applications was activated or inactivated.</p> <p>Whitelist automation rule for automatically blacklisting non-whitelisted applications was activated or inactivated.</p>
Clean Inventory Data Contract (CIDC)	<p>CIDC was added, changed or deleted.</p> <p>CIDC period was deleted or manually activated.</p> <p>All data for a CIDC was deleted.</p> <p>All data for a CIDC was deleted in Snow Inventory.</p> <p>All data for a CIDC was preserved for X days.</p> <p>All data for a CIDC was restored.</p>
Computers	<p>Computer could be archived.</p> <p>Computer failed to be archived.</p> <p>Computer was deleted from archive.</p> <p>Computer was set to inactive.</p> <p>Datacenter/cluster was deleted.</p> <p>Computer metadata was imported.</p>

Category	Logged change
Custom fields	<p>Custom field for compare value was deleted.</p> <p>Custom field was deleted.</p> <p>Custom field value was deleted.</p>
Devices	<p>Device was deleted.</p> <p>Multiple devices were deleted.</p>
Documents, licenses, and objects	<p>Document was deleted.</p> <p>License was moved.</p> <p>Notification was deleted.</p> <p>Object property or type was deleted.</p> <p>Oracle order was added or deleted.</p>
Users and settings	<p>Organization import was completed.</p> <p>System setting was set to default, changed, or changed from default.</p> <p>All system settings were set to default.</p>