

VeraLab™
Computer Lab Management Suite
Administrator's Guide

8.0 for Microsoft Windows

July 2017

VeraLab Administrator's Guide, 8.0 for Microsoft Windows

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- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
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- Electronic mail: info@veralab.com
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San Jose, CA 95133
USA

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Preface

This guide is your primary source of introductory, postinstallation, configuration, and administration information for using VeraLab Computer Lab Management Suite.

This preface introduces you to the VeraLab Administrator's Guide, discussing the intended audience, structure, and conventions of this document. A list of related VeraLab documents is also provided.

This preface contains these topics:

- [Audience](#)
- [Organization](#)
- [Related Documentation](#)
- [Conventions](#)

Audience

VeraLab Administrator's Guide for Windows is necessary for anyone installing, configuring, or administering VeraLab Computer Lab Management Suite.

VeraLab Administrator's Guide is intended for Computer Lab Managers, Administrators, Technicians, and other lab personnel who perform the following tasks:

- Manage computer lab facility and personnel
- Perform system administration and setup

To use this document, you need:

- Windows Vista, Windows 7, Windows 8.1, Windows 10, Windows 2008/2008 R2, or Windows Server 2012/2012 R2 installed and tested on your computer system.

Organization

This guide contains the following chapters and appendixes:

Chapter 1, VeraLab Administration

This chapter describes how to administer VeraLab system.

Chapter 2, VeraLab Maintain Data

This chapter describes how to perform data import to facilitate VeraLab system set up and how to purge historical data from the database.

Appendix A, System Settings

This appendix describes how to set and tune system settings on your VeraLab server.

Related Documentation

This guide is a part of a set for computer lab personnel using VeraLab Computer Lab Management Suite. The other guides in the set are:

VeraLab Server Installation and Upgrade Guide

VeraLab Guard Client Installation Guide

VeraLab User's Guide

To download free release notes, installation documentation, white papers, or other collateral, please visit www.veralab.com.

Conventions

This section describes the conventions used in the text of this documentation set. We use various conventions in text to help you more quickly identify special terms. The following table describes those conventions and provides examples of their use.

Convention	Meaning	Example
Bold	Bold typeface indicates screen elements, such as elements of forms or menu items.	Select the Available checkbox.
<i>Italics</i>	Italic typeface indicates book titles or emphasis.	You <i>can not</i> make currently used workstations unavailable.
<i>Bold Italics</i>	Bold and Italic typeface indicates screen names and areas.	The screen changes to <i>Dashboard</i> .
<>	Angle brackets enclose variables or optional items.	The <i>Dashboard</i> <i><counter_name></i> page appears for that counter.

VeraLab Administration

This chapter describes how to perform configuration of environment and maintain VeraLab. This chapter covers the following topics:

- [Managing VeraLab Objects](#)
- [Student Portal](#)
- [Managing System Settings](#)
- [Web Service API](#)
- [Roles and Tasks Customization](#)
- [Diagnostics](#)
- [Managing Software Licenses](#)
- [VeraLab Client Administration](#)

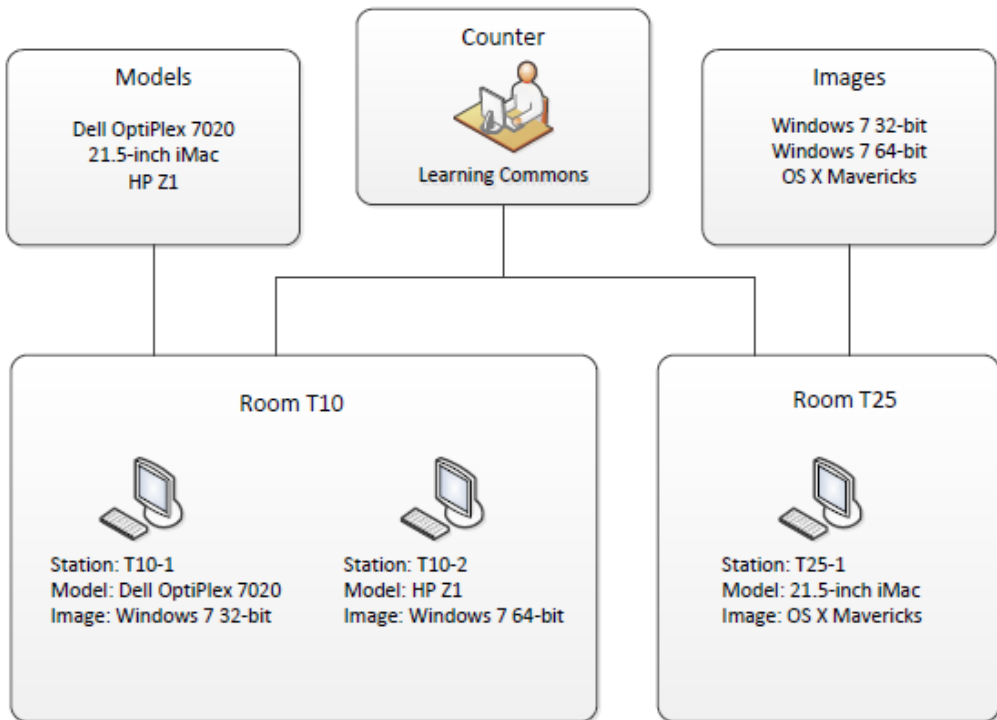
Managing VeraLab Objects

VeraLab objects are logical units that represent real-life objects. Most of VeraLab objects have intuitive names and they usually correspond to real-life names, such as employees, rooms, workstations. Some, for example Semesters, correspond to academic timelines and are usually specific to each academic institution and could be equivalent to quarters or trimesters.

VeraLab Objects Hierarchy

VeraLab environment comprises objects that depend on each other, therefore it is important to understand the hierarchy of objects. Parent objects have to be created first and removed last. Objects not included in this hierarchy can be managed in any order. See the chart on figure 1-1.

Figure 1-1: *VeraLab Objects Hierarchy.*



Note You need to complete your environment setup before installing client software. During client software installation and registration with VeraLab server you will be prompted to specify workstation attributes, such as model, image, and which room it should be assigned to.

Review this hierarchy chart before manually adding/removing objects or conducting an import (see [Performing Import](#) for more details and how-to information). Objects can be added, edited, or deleted. In order to add or edit an object you have to fill/update a form which contains object's attributes. All objects have mandatory and optional attributes. Mandatory attributes are in *red* color and *can not* be omitted. Optional attributes are in *black* color and can be omitted unless otherwise stated. Once deleted, objects 'retire', which means that all references to them are retained in the database for reporting or search purposes.

Employee Administration

You can either create native application accounts or integrate VeraLab with campus central LDAP/MSAD directory and provision LDAP accounts.

Each employee in VeraLab has to be provisioned (must have at least one security role assigned). An employee must be **Active** (The **Active** check box must be selected) in order to be able to login into the system. Hourly employees will have access to the **Shift Start/End** page and they will show on payroll reports. If you are using VeraLab Suite together with VeraLab Guard client, you can assign the following rights to an employee: *Get Screenshots*, *Get List of Client Processes*, *Terminate Client Processes*, and *Send Messages to Workstations*. These rights enable lab employees to have limited control of client workstations from the **Monitoring** page.

Note For more information, see Starting/Ending Shifts and Managing Staff Payroll in *User's Guide*, and [Remote Client Update](#) in this guide.

Starting from version 5.5 Employees can be segregated into groups. Groups can facilitate access control setup to specific counter Dashboards in the lab.

To create or add an employee group:

1. Navigate to **Administrator (role) ► Setup ► Users**.
2. In the *Employee Administration* page, click the **Manage Employee Groups** link.
3. In the *Employee Group Administration* page, click the **Add Employee Group** link.
4. In the *Add Employee Group* page, fill the appropriate fields.

To add an employee:

1. Navigate to **Administrator (role) ► Setup ► Users**.
2. In the *Employee Administration* page, click the **Add Employee** link.
3. In the *Add New Employee* page, fill the appropriate fields.

Note You have to select at least one role for each employee.

4. Click **Add**.

To edit an employee:

1. Navigate to **Administrator (role) ► Setup ► Users**.
2. Click the **Edit** icon next to an appropriate employee.
3. In the *Edit Employee <username>* page, update the appropriate fields.
4. Click **Update**.

To delete an employee:

1. Navigate to **Administrator (role) ► Setup ► Users**.
2. Click the **Delete** icon next to an employee you want to delete.

Starting with version 5.5, each employee can have restricted access to counter Dashboards. There are several available options:

- Employee can access dashboards on all counters (default option).
- Employee can access dashboards defined for employee group he/she is part of. Group must be created first to become available in the drop-down list. See how to create an employee group above in this section.
- Employee can access dashboards on selected counters. Check checkboxes next to appropriate counters.

Using LDAP for Employee Authentication

Starting with version 6.0 it became possible to authenticate VeraLab application users (Employees) using LDAP.

To provision LDAP account as VeraLab Employee record:

1. Navigate to **Administrator (role) ► Setup ► Users**.
2. Click the **Provision LDAP Users** link on the top.

3. Fill out LDAP connection details such as LDAP Server URL, path to the user records container (Base DN), ID attribute (e.g. CN or sAMAccountName), and LDAP server lookup account DN and password. When using MSAD directory, ID attribute is not required (it is set to sAMAccountName by default), instead MSAD Domain Name must be entered.

Note If you are using single directory for employee and user authentication, you can configure LDAP under Common Settings and then re-use (inherit same settings for Employee, User, and report authentication. You can read more about LDAP configuration in LDAP Configuration Guide document: http://veralab.com/veralab/files/VERALAB_LDAP_Configuration_Guide.pdf

4. Click **Test Connection** button to verify VeraLab server can connect to LDAP server on specified port using end user (Employee) credentials.
5. Click **Update** button to start provisioning users with VeraLab application roles and privileges same as you would do for Native accounts.

Note VeraLab does not support duplicate usernames. For example, if you have an employee record with username *jsmith* and would like to provision *jsmith* from LDAP directory, native account record must be deleted first.

Converting accounts from Native to LDAP

Starting with Version 6.5 you can convert accounts from Native to LDAP, assuming you have already setup LDAP connectivity and records with same usernames exist in LDAP directory. See above paragraph how to enable LDAP integration. You will receive an error message if you try to convert a Native account not existing in LDAP directory.

To convert Native account into LDAP:

1. Navigate to **Administrator (role) ► Setup ► Users**.
2. Locate account record you wish to convert and click the **Convert to LDAP** icon next to Native account type. **Convert to LDAP** icon will not be displayed if LDAP integration has not been setup.
3. You will see a pop-up message prompt **Would you like to convert this native account to LDAP?** Click OK.
4. If conversion was successful, you will see a confirmation message and the account type will change to LDAP

Workstation Administration

Workstations belong to the lowest level of dependency hierarchy (see [Figure 1-1](#)). Before adding new Stations, you have to define Counters and Rooms. Each workstation has to be assigned to a room, an image, and a model. If the **Available** check box is selected, all newly created workstations are immediately available for registrations using Lab Assistant's dashboard. The **Maximum Registration Length (min.)** setting is inherited from the system settings and can be overwritten on the workstation level.

To add a workstation:

1. Navigate to **Administrator (role) ► Setup ► Stations**.
2. In the *Workstation Administration* page, click the **Add Workstation** link.
3. In the *Add New Workstation* page, fill the appropriate fields.
4. Click **Add**.

To edit a workstation:

1. Navigate to **Administrator (role) ► Setup ► Stations**.
2. Click the **Edit** icon next to the appropriate workstation.
3. In the *Edit Workstation <name>* page, update the appropriate fields.
4. Click **Update**.

Note Workstation Edit page allows to change availability and VeraLab Guard settings for individual workstations. To change a workstation's availability, click the **Edit Availability** link. If *Available* checkbox is selected (default), workstation is ready for sign in. If *Reservable* checkbox is selected, workstation is available for individual bookings (if an optional reservation module *Booking App* has been installed and configured). The **Guard** and **Watch** properties are set for entire lab in the *Settings* page. VeraLab Guard system settings can be overridden on a room level or on a workstation level. For more information, see [System Settings](#) appendix.

Note Starting with version 6.5, VeraLab allows you to “hide” stations from real-time statistics dashboard (Student Portal) and other external interfaces using VeraLab web service. E.g. you have some stations reserved for special needs and you don’t want them to appear on Student Portal or Mobile Application as available. To hide such stations, uncheck **Display in Student Portal** checkbox on the Edit Workstation page.

To delete a workstation:

1. Navigate to **Administrator (role) ► Setup ► Stations**.
2. Click the **Delete** icon next to the appropriate workstation.

Note You *can not* delete a workstation that is currently in use or unavailable.

Note Starting with version 7.2, multiple stations can be deleted simultaneously.

Workstations default **Locking Mode** value is inherited from **Room** or entire application settings. If changed on **Room** level, all stations in the room will change default values. However an individual workstation value can be overridden on station level in the *Edit Workstation* screen.

When **Locking Mode** is set to *Strict*, workstations screens are automatically locked when such events as Sign-out or End of Class are triggered. When **Locking Mode** is set to *Liberal*, workstation screens stay unlocked but can be locked manually by executing remote command from the **Monitoring** task.

Normally *Liberal* locking mode option is used in Self-Service environments and *Strict* mode is used in environments with Counter Sign-In scenario.

Starting with version 7.2 VeraLab supports client-server connectivity (go to Tools->Settings->Guard Settings -> Recognize Client Workstation by) using MAC Addresses. Stations can store multiple MAC addresses and verify uniqueness of MAC addresses.

Starting with version 7.2 VeraLab supports adding client stations to “Banned Stations” list. Stations that are part of *Banned Stations* list (based on their MAC address) will not be allowed to communicate to VeraLab server.

Model Administration

Models have to be defined prior to defining workstations. They do not depend on any other object. Usually *Model* field comprises manufacturer brand name, model name, and model number.

Note Starting with version 5.x VeraLab comes with an optional reservation module *Booking App* which allows users to book either individual workstations or entire room in advance. To be able to search available workstations meeting specific criteria, e.g. with CPU speed at least 2000 MHz and with 2 cores, models need to have CPU Speed, CPU Cores, RAM values defined. It is important to use integer values for those fields, e.g. 4 for the number of CPU Cores. However these are optional fields and if left undefined, the search will not render any results.

To add a model:

1. Navigate to **Administrator (role) ► Setup ► Models**.
2. In the *Model Administration* page, click the **Add Model** link.
3. In the *Add New Model* page, fill the appropriate fields.
4. Click **Add**.

To edit a model:

1. Navigate to **Administrator (role) ► Setup ► Models**.
2. Click the **Edit** icon next to the appropriate model.
3. In the *Edit Model <name>* page, update the appropriate fields.
4. Click **Update**.

To delete a model:

1. Navigate to **Administrator (role) ► Setup ► Models**.
2. Click the **Delete** icon next to the appropriate model.

Note You *can not* delete a model that has dependent workstations.

Room Administration

Rooms can be associated with physical rooms in the computer lab or they can be logical collections of workstations. It is up to a lab manager or administrator how to arrange rooms. Rooms belong to the middle level of dependency hierarchy (see [Figure 1-1](#)). Rooms depend on counters and they normally have dependent workstations. Rooms have to be defined prior to defining workstations. The **Maximum Class Registration Length (min.)** setting is inherited from the system settings and can be overridden on the room level.

To add a room:

1. Navigate to **Administrator (role) ► Setup ► Rooms**.
2. In the *Room Administration* page, click the **Add Room** link.
3. In the *Add New Room* page, fill the appropriate fields.
4. Click **Add**.

To edit a room:

1. Navigate to **Administrator (role) ► Setup ► Rooms**.
2. Click the **Edit** icon next to the appropriate room.
3. In the *Edit Room <name>* page, update the appropriate fields.
4. Click **Update**.

Note Room Add/Edit pages allow to change rooms' VeraLab Guard settings. The **Guard** and **Watch** properties are set for entire lab in the *Settings* page. VeraLab Guard system-level settings can be overridden on a room level or on a workstation level. For more information, see [System Settings](#) appendix.

There are two new settings introduced in versions 3.0 and higher: **Sign-in Mode** and **Display in Student Portal**. By selecting **Display in Student Portal** you can add a room to the list of rooms displayed on the *Student Portal* page.

Note For more information, see [Student Portal](#) section.

To delete a room:

1. Navigate to **Administrator (role) ► Setup ► Rooms**.
2. Click the **Delete** icon next to the appropriate room.

Note You *can not* delete a room that has dependent workstations.

Image Administration

Images have to be defined prior to defining workstations. Images do not depend on any other object. An *image* is a collection of software installed on a workstation. One image is usually propagated to several workstations in a lab.

To add an image:

1. Navigate to **Administrator (role) ► Setup ► Images**.
2. In the *Image Administration* page, click the **Add Image** link.
3. In the *Add New Image* page, fill the appropriate fields.
4. Click **Add**.

To edit an image:

1. Navigate to **Administrator (role) ► Setup ► Images**.
2. Click the **Edit** icon next to the appropriate image.
3. In the *Edit Image <name>* page, update the appropriate fields.
4. Click **Update**.

To delete an image:

1. Navigate to **Administrator (role) ► Setup ► Images**.
2. Click the **Delete** icon next to the appropriate image.

Note You *can not* delete an image that has dependent workstations.

Semester Administration

Semester is a common name used in VeraLab for specifying an academic timeline. A Semester can be equivalent to an academic quarter or an academic semester, and is specific to an individual academic institution schedule. Semesters are used in reports for easier presentation and analysis. An example of semester name (if semester is equivalent to an academic quarter) can be *Fall 20014* or *Summer 2014*.

To add a semester:

1. Navigate to **Administrator (role) ► Manager Board ► Semesters**.
2. In the *Semester Administration* page, click the **Add Semester** link.
3. In the *Add New Semester* page, fill the appropriate fields.
4. Click **Add**.

To edit a semester:

1. Navigate to **Administrator (role) ► Manager Board ► Semesters**.
2. Click the **Edit** icon next to the appropriate semester.
3. In the *Edit Semester <name>* page, update the appropriate fields.
4. Click **Update**.

To delete a semester:

1. Navigate to **Administrator (role) ► Manager Board ► Semesters**.
2. Click the **Delete** icon next to the appropriate semester.

Counter Administration

Counters belong to the highest level of VeraLab hierarchy (see [Figure 1-1](#)). Counters are composed of rooms and rooms have workstations assigned to them. VeraLab counter corresponds to real-life check-in point for workstation registrations, waitlists, etc. Counters have to be defined prior to rooms and workstations. At least one counter must be defined even if all lab rooms operate in self-service mode.

To add a counter:

1. Navigate to **Administrator (role) ► Setup ► Counters**.
2. In the *Counters Administration* page, click the **Add Counter** link.
3. In the *Add New Counter* page, fill the appropriate fields.
4. Click **Add**.

To edit a counter:

1. Navigate to **Administrator (role) ► Setup ► Counters**.
2. Click the **Edit** icon next to the appropriate counter.
3. In the *Edit Counter <name>* page, update the appropriate fields.
4. Click **Update**.

To delete a counter:

1. Navigate to **Administrator (role) ► Setup ► Counters**.
2. Click the **Delete** icon next to the appropriate counter.

Note You *can not* delete a counter that has dependent rooms.

Note If VeraLab is used in Self-Service environment, where users have their own login credentials and do not need to sign in via counter station, Counters have to be set anyway for lab Monitoring purposes.

Student Portal

Student Portal is a read-only page available to public via browser:

http://vl_server_name:8080/veralab/portal

It doesn't require users to sign-in to VeraLab Application. Student Portal page can be enabled (default) or disabled. If it is disabled users will see **Student Portal is disabled** when reaching above URL. To enable/disable Student Portal page go to **Administrator (role) ► Tools ► Settings ► Student Portal Settings**.

Note For more information, see [System Settings](#) appendix.

It is possible to view mobile version of Student Portal by pointing a smart phone browser to:

http://vl_server_name:8080/veralab/mportal

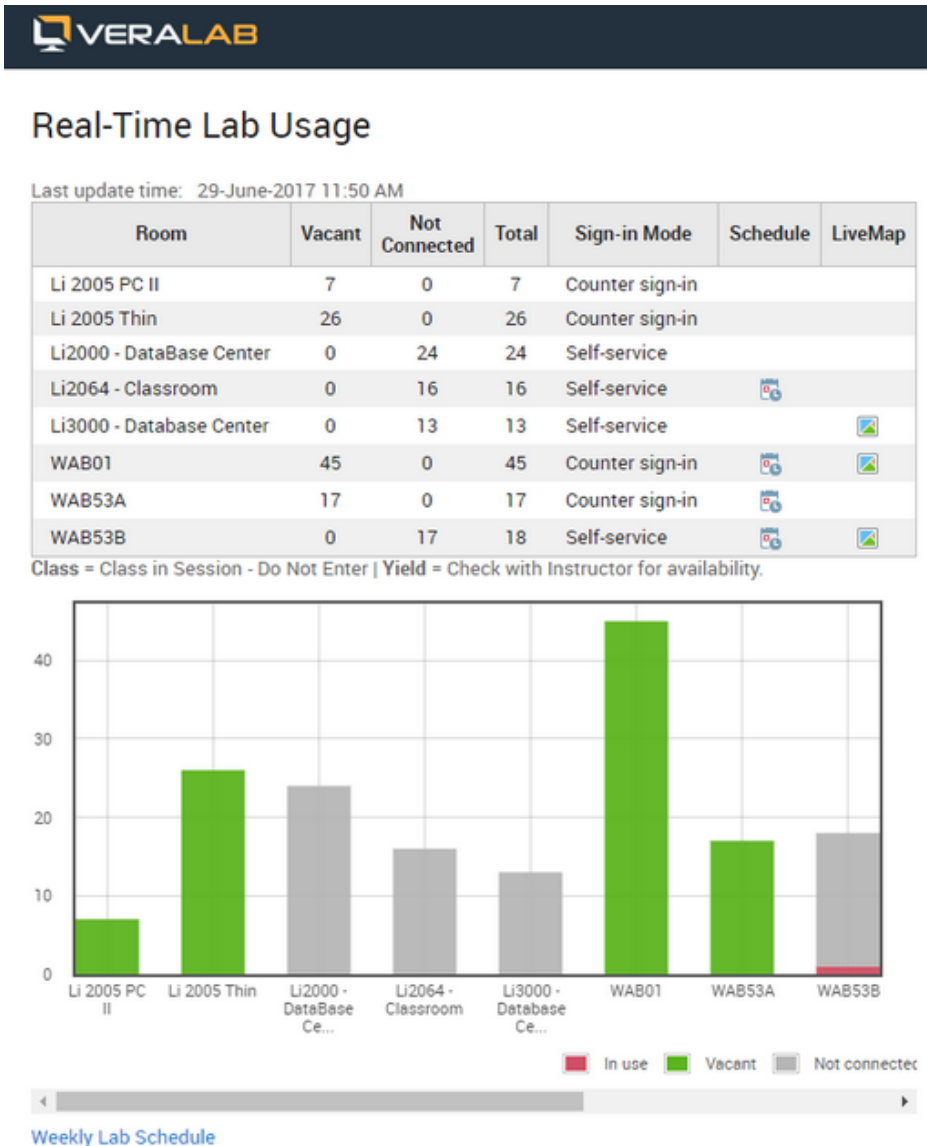
Mobile version of Student Portal does not display charts.

Starting with version 5.5, Student Portal has new section **Quick Links**. It is displayed in the bottom of Student Portal page and may contain a list of links to external references outside of VeraLab application. **Quick Links** list is managed under the **Manager** role, **Manager Board** menu category, **Quick Links** task.

Starting with version 6.5, Student Portal has new link to Weekly Lab Schedule. To create and publish Lab Schedule, login to VeraLab application as admin user and go to **Student Portal ► Lab Schedules** menu. **Weekly Lab Schedule** link on the Student Portal page will display a schedule only if today's date falls within a predefined schedule period date range. E.g. if you created a schedule for Fall 2014 that has effective dates from 01-Sep-2014 to 31-Dec-2014 and today's date is 15-Aug-2014, such schedule will not be displayed on Student Portal.

To view text-only version of LiveMaps, open a live map page for a room of your choice and you will see **Text-only LiveMap** link in the upper left corner of the page.

Figure 1-2: VeraLab Student Portal



See *VeraLab User's Guide* for more information about Schedules and LiveMap features.

Web Service API

Starting with version 5.x, VeraLab offers web service to provide information about computer usage via GET requests.

VeraLab web service is available at `http://[veralab_host]:8080/veralab/occupancy`. It returns the following data:

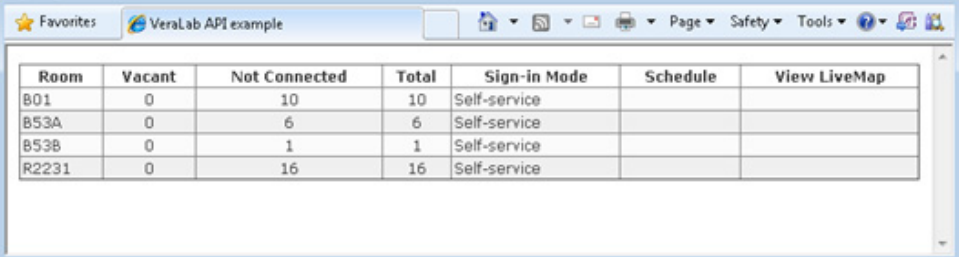
```
{“data”:[{“total”:58,“id”:"1014",“unavailable”:1,“occupied”:0,“vacant”:"0",“vacantNum”:0,“not_connected”:57},{“total”:54,“id”:"1013",“unavailable”:11,“occupied”:0,“vacant”:"Yield",“vacantNum”:43,“not_connected”:0},{“total”:109,“id”:"1016",“unavailable”:0,“occupied”:0,“vacant”:"0",“vacantNum”:0,“not_connected”:109},{“total”:100,“id”:"1015",“unavailable”:0,“occupied”:0,“vacant”:"0",“vacantNum”:0,“not_connected”:100}]}
```

where

- id - room id.
- vacant - number of available for use computers represented as a string, can also return class or yield.
- vacantNum - number of available for use computers represented as an integer.
- occupied - number of computers in use.
- unavailable - number of unavailable computers.
- not_connected - number of disconnected computers.
- total - number of computers in a room.

Below is another API example using JSON data-interchange format. To extract data from VeraLab in format displayed in Figure 1-1, please refer to the code from Figure 1-2 below.

Figure 1-1:



Room	Vacant	Not Connected	Total	Sign-in Mode	Schedule	View LiveMap
B01	0	10	10	Self-service		
B53A	0	6	6	Self-service		
B53B	0	1	1	Self-service		
R2231	0	16	16	Self-service		

Figure 1-2:

```
<html>
<title>VeraLab API example</title>
```

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.5.1/
jquery.min.js"></script>
<style>
table.srkTable {
    background-color: white;
    border-collapse: collapse;
    border-color: gray;
    border-spacing: 2px;
    border-style: outset;
    border-width: 1px;
    color: #333333;
    font-family: Verdana,Tahoma,Arial,Sans-serif;
    font-size: 12px;
}
.srkListHeaderText {font-weight: bold; border:1px solid
gray;padding:2px;}
.srkListOddCell {background-color: #FBFBFB; padding-bottom: 2pt;
padding-left: 2pt; padding-top: 2pt; vertical-align: top;}
.srkListEvenCell {background-color: #F0F0F0; padding-bottom: 2pt;
padding-left: 2pt; padding-top: 2pt; vertical-align: top;}
.srkListCell {padding: 2px; border:1px solid gray;}
a.srkListLink {color: #333333;}
</style>
<script>
$(document).ready(function()
{
    var baseURL = 'http://127.0.0.1:8080/veralab/';
    $.getJSON(baseURL+'occupancy?mode=full&jsoncallback=?', {},
function(json)
{
    var str = '<table border="0" cellpadding="0"
cellspacing="0" width="100%" class="srkTable"><tr>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">Room</td>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">Vacant</td>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">Not Connected</td>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">Total</td>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">Sign-in Mode</td>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">Schedule</td>';
    str+='<td class="srkListHeaderText" align="center"
nowrap="nowrap">View LiveMap</td>';
```

```

        str+="|";
        var str1 = '';
        for (var i = 0; i < json.data.length; i++)
        {
            str+='<tr
class="'+(i%2==0?'srkListOddCell':'srkListEvenCell')+'>'
            var id = json.data[i].id;
            var total_st = json.data[i].total;
            var vacant_st = json.data[i].vacantNum;
            var not_connected_st = json.data[i].not_connected;
            var roomName = json.data[i].roomName;
            var signinMode='';
            if (json.data[i].hasOwnProperty('signinMode')) {
                signinMode= json.data[i].signinMode;
            }
            var scheduleLink='';
            var mapLink='';
            if (json.data[i].hasOwnProperty('scheduleURL')) {
                scheduleLink='<a title="" class="srkListLink"
onclick="window.open(\''+baseUrl+json.data[i].scheduleURL+
                '\',
                \'view_schedule\',\'width=600,height=600,resizable=yes,scrollbars=yes,menubar=no,toolbar=no\')" '+
                'target="_self"
href="javascript:void(0);">Schedule</a>';
            }
            if (json.data[i].hasOwnProperty('mapURL')) {
                mapLink='<a title="" class="srkListLink"
onclick="window.open(\''+baseUrl+json.data[i].mapURL+
                '\',
                \'live_map\',\'width=800,height=600,resizable=yes,scrollbars=yes,menubar=no,toolbar=no,location=no,statusbar=no\')" '+
                'target="_self"
href="javascript:void(0);">LiveMap</a>';
            }
            str+='<td class="srkListCell"
align="left">'+roomName +'</td>';

                str+='<td align="center" id="vacant'+id+' "
class="srkListCell">'+vacant_st+'</td>';
                str+='<td align="center" id="ncntd'+id+' "
class="srkListCell">'+not_connected_st+'</td>';
                str+='<td align="center"
class="srkListCell">'+total_st+'</td>';
                str+='<td class="srkListCell"
align="left">'+signinMode +'</td>';

|  |

```

```
                str+='<td class="srkListCell"
align="left">'+scheduleLink +'</td>';
                str+='<td class="srkListCell" align="left">'+mapLink
+'</td>';
                str+='</tr>';
            }
            str+="</table>";
            $('#labtable').html(str);
        });
        setInterval(function() {
            $.getJSON(baseUrl+'occupancy?jsoncallback=?', {},
function(json) {
                for (var i = 0; i < json.data.length; i++) {
                    var id = json.data[i].id;
                    var vacant1 = json.data[i].vacant;
                    try { $('#vacant' + id).text(vacant1); } catch(e) {}
                    var not_connected_st = json.data[i].not_connected;
                    try { $('#ncntd' + id).text(not_connected_st); }
catch(e) {}
                }
            });
        }, 30000);
    });
</script>
<body>
<div id="labtable"></div>
</body>
</html>
```

In the above code example `baseUrl` variable needs to be updated with your existing VeraLab host name or IP address and port number. When request parameters include `mode=full` the following fields are retrieved:

`roomName` - Room Name.

`signinMode` - Self-Service or Counter sign in mode.

`scheduleURL` - string following `baseUrl` corresponding to room's schedule. This is an optional property. It does not get retrieved if there is no Room schedule in the database.

`mapURL` - string following `baseUrl` corresponding to a room's map. This is an optional property. It does not get retrieved if there is no Room map in the database.

It is recommended to put `mode=full` for the first request followed by periodical requests without it.

Managing System Settings

VeraLab settings are adjustable parameters that can be tuned to reflect your business requirements. System settings are grouped into several categories. This chapter gives a generic overview of the settings used in VeraLab and how to customize them. For a detailed description and value ranges, see [System Settings](#).

Editing System Settings

We recommend reviewing [System Settings](#) appendix carefully before changing any system setting.

To edit a setting:

1. Navigate to **Administrator (role) ► Tools ► Settings**.
2. In the settings *Main Menu* page, click an appropriate settings category.
3. In the *Edit <setting_category> Settings* page, update the appropriate fields.
4. Click **Update Settings**.

Viewing System Settings

For convenience, all system settings can be displayed on one page. The page will display settings in read-only mode.

To view all settings:

1. Navigate to **Administrator (role) ► Tools ► Settings**.
2. In the settings *Main Menu* page, click the **View All Settings** link in the bottom. The *List of All Settings* page will be displayed.

Client Authentication Settings

Client authentication settings control and define access to client OS sessions when using VeraLab. When you enable authentication for clients running LDAP version of VeraLab client, it is used with Self-Service or Mixed sign on scenarios. Enabling LDAP requires special version of VeraLab client to be installed. It is available for download at www.veralab.com. If you are not using MSAD authentication and would like to enable Self-Service sign-on in your lab, LDAP integration should be your choice. It allows your patrons to sign-on directly at workstations using VeraLab sign-on screen. VeraLab integration with LDAP comes with minimum required functionality as an out of the box solution and it can be further customized to fit your lab requirements. Contact support@veralab.com for more information.

In addition to LDAP integration you can set up clients to use native accounts for client-side authentication. VeraLab supports 5 types of native accounts that are stored locally on VeraLab server: Admin, Maintenance, Long-term, Mid-term, and Short-term accounts. These accounts allow bypassing LDAP authentication and normally used by lab employees or users whose records are not stored in LDAP directory. Detailed description is provided on the ***Client Authentication Settings*** page.

When Admin Accounts functionality is enabled (by default), the Admin Accounts task will be displayed under **Setup ► Admin Accounts** menu. Short/Mid/Long term accounts are not enabled by default. To enable this functionality you need to add these tasks to a role of your choice using **Setup ► Roles** menu. Then enable them using **Tools ► Settings ► Client Authentication Settings** menu. Once enabled they will show under the **Lab Control** menu. You may need to log out and re-login to see this change.

Starting with version 7.0 VeraLab allows to configure and use multiple LDAP directories. To change or update LDAP setting, click on the **Change LDAP Settings** link in the bottom of the page.

Email and Notification Settings

Email and Notification settings control email notifications, e.g. notifications sent to Technicians when a new technical issue is logged. It is recommended to setup correct values before releasing the system into production. If a notification email value is left blank, email notifications will be disabled.

Starting with version 5.5 VeraLab comes with new Inventory functionality. **Inventory Notification Email** setting is used to notify email addressees when inventory threshold levels are reached.

Guard Settings

Guard settings control client-server behavior and policies. This is the key page for setting up communication between client (VeraLab Guard) and VeraLab Server, e.g. communication port and password. Here you can also specify client monitoring and controlling policies on Site Level. These can be overridden on room or workstation level. See “[Managing VeraLab Objects](#)” in this Guide.

Starting with VeraLab version 7.2, it is possible to set up client-server registration using MAC address. By default “Recognize Client Workstation by” is set to *Host Name*.

Notification Server Settings

Notification settings control notification server behavior and SMTP server parameters and values. Notification Server is used to send out workflow notifications, e.g. a notification that a

workstation has been set out of order would be automatically sent out to all employees who have Technician Role.

Payroll Settings

Payroll settings control the behavior of the *Payroll* pages, which can be accessed by *Manager*, *Lab Assistant*, and *Supervisor* security roles. Hourly employees time sheet information can be edited by managers or supervisors. However, for security and integrity purposes, an administrator can adjust the time period during which it would be possible to modify employees shifts start and end time. Time frame for accessing the *Payroll* page without re-entering user password can also be adjusted.

Registration Settings

Registration settings control student and class registrations, waitlists, and dashboard behavior. Registration settings affect warnings related to registrations and waitlists.

Note Starting with version 5.x a new option is available to propagate application level settings to room or station level. For example, during setup workstations inherit **Maximum Student Registration Time (minutes)** setting from application level. When new stations are added (or during bulk Import), they take value from the application level. If this setting is changed on a station level, it overrides an application level setting. Prior to version 5.x there was no simple way to update this station level setting for all stations in the environment after initial setup. Now application level setting comes with an option **Cascade to existing stations** which, if selected, will update maximum registration time for all stations at once. This may come handy if it is required to change maximum student registration time during examination weeks, etc.

For more information on types of warnings, see “Dashboard Warnings” chapter in *User’s Guide*.

Reports Settings

Reports settings control reports submission and output. Changes to reports settings may affect the performance of the application, therefore, it is important to understand their meaning before editing values. You can specify maximum number of options that can be selected from multiple-option drop-down lists (**Number of Selected Options** setting). Reports can be generated to display multi-month intervals (referred as **Step** in the report forms).

For example, you can generate a report that will display three-month intervals (Jan-Mar, Apr-Jun, etc.) or six-month intervals (Jan-Jun, Jul-Dec). The **Maximum Number of Periods in Reports** setting specifies the maximum number of such intervals. The default value for **Maximum**

Number of Periods in Reports settings is twelve, meaning that if you select one-month intervals, you can generate a report for complete calendar year (e.g. February 2004 - January 2005) but not more than that.

Starting with version 5.5 there is a new setting Page size for PDF printing that supports two main page sizes: Letter and A4.

Security Settings

Security settings control various aspects around application, e.g. password protection or web session timeout. Password setting is used for VeraLab native accounts only. When LDAP authentication is used for Employee authentication, this setting is not used.

In order to restrict access to clock in and out functionality based on IP addresses, starting with version 6.x **Shift Start/End Task Access List** setting has been introduced. Enabling **Enforce Lab Assistant shifts assignment to counters** setting will require hourly employees to select counter during Clock In.

Self-Service Settings

Self-Service settings will be applied in self-service enabled environments and control alerts behavior.

Sign-In Settings

You can select Sign-In Mode for your entire lab during or after VeraLab Server installation.

Select Self-Service Sign-in option if you are using Active Directory or another LDAP authentication to Log On to client workstations in your environment. This option will hide all counter sign-in task tabs: Dashboard, Class Registrations, Waitlist, Manage lab, Counter Stats, Counter reports.

Select Counter Sign-in option if users need to sign-in at the counter before starting to use workstations in the lab. This option will hide all Self-Service task tabs: Self-service stats, Self-service reports.

Select Mixed sign-in option if you plan on using Counter sign-in together with LDAP authentication, e.g. if you have LDAP as a primary method of authentication, but certain stations or rooms in your lab require counter sign-in. It will show both Counter and Sign-in task tabs in the application roles.

Warning Changes to this setting requires re-login.

Student Portal Settings

Student Portal settings control Student Portal page on the site level. You can enable/disable Student Portal page or it's individual elements: Schedules and LiveMaps. You can also customize what columns and in what order to be displayed. Student Portal page is available in full and mobile versions that display workstation availability in real time.

Wake on LAN Settings

Wake on LAN is an Ethernet computer networking standard that allows a computer to be turned on or woken up remotely by a network message. Most modern motherboards with an embedded Ethernet controller support Wake-on-LAN without the need for an external cable. Older motherboards must have a WAKEUP-LINK header onboard and connected to the network card via a special 3-pin cable.

Common LDAP Settings

Common LDAP settings allow you to configure a single or multiple directories that would be used across application. LDAP integration can be used for client-side authentication, VeraLab web application logon and in some reports to search LDAP records for additional attribute values, e.g. when you would like to see users first and last names together with usernames in reports that support this functionality. In order to use multiple directories, fill out the form with first directory and click on **Advanced Mode** button. Multiple directories will be searched in the order they are displayed, from top to bottom. You can change the search order by clicking on up and down arrows and then clicking **Save** button in the end. When switching back to using a single directory (Simple Mode), all but first directory in the list will be deleted. Make sure that you move your primary directory to the top before switching to Simple Mode.

Warning Once you are done with configuration changes, click **Save** button to exit otherwise your changes will not be saved.

Roles and Tasks Customization

Starting with version 6.x VeraLab allows customizing and editing existing roles and creating new custom roles. Tasks define what application areas users can have access to. VeraLab comes with a set of predefined/seeded roles. They can be edited, e.g. some existing tasks can be deleted or/and new tasks added. If this still does not satisfy environment needs, new custom roles can be created.

Note Predefined Administrator role must have the following mandatory tasks: Users, Settings, About. All changes made to roles and tasks will be enabled after user's next logout and login.

To customize VeraLab roles:

1. Navigate to **Administrator (role) ► Setup ► Roles**.
2. To edit existing role click on **Edit** icon next to a role.
3. To add new custom role click on **Add Role** link.
4. On the **Add** or **Edit** role page, make necessary selections/changes, set desired default role and click on **Add** or **Update** button to apply changes.

A new report **Users of Role** has been introduced to generate a list of users provisioned to a role. This report is available under **Manager** role.

Diagnostics

Diagnostics page is used to gather logs and system information from client workstations. VeraLab support may ask you to turn on logging on the client(s) and upload trace logs for further troubleshooting and analysis. To turn on client log generation:

1. Navigate to **Administrator (role) ► Tools ► Diagnostics**.
2. Select a room from the drop-down menu.
3. Select **Start Log** from the **Action** drop-down menu.
4. Select one or more client stations using checkbox(es).
5. Click Execute button.

It may be required to refresh the *Diagnostics* page after a while to verify that log level has been changed. If log is successfully turned on, **Log Level** field value will change from *None* to *Finest*. To save client log file, click on **Get Log** icon and save the compressed file.

Diagnostics and *Monitoring* pages look very similar. Extra features on *Diagnostics* page include the ability to turn on the logging on client computers and retrieve client specs (CPU speed, RAM, Disk size) directly from client workstations. To retrieve client specs, click on an “i” icon next to a selected station. Diagnostics page will also display a VeraLab software version installed on clients. Starting with version 7.0 Computer Info pop-up page will also display information about video cards and their drivers and well as additional details about hard disks and their firmware.

Managing Software Licenses

Limiting Concurrent Licenses

VeraLab allows to control the number of concurrent licenses used in a computer lab. Lab administrators can install a software with limited number of acquired licenses on every workstation, but only the specified number of workstations will be able to run such software at the same time. Lab administrators can also prevent certain applications to be launched from workstations by setting the number of licenses for those applications equal to zero.

To view licenses, navigate to **License Administrator (role) ► Licenses**. On the *License Administration* page, you can see the maximum number of licenses (Threshold) for each application and a number of currently used licenses (In Use Licenses). Starting with version 7.0 the page uses AJAX technology to automatically retrieve number of used application without a need to refresh this page. *In Use Licenses* pop-up window allows terminating selected program on one or more stations remotely.

To add a new license:

1. Navigate to **License Administrator ► Licenses**.
2. In the *License Administration* page, click the **Add License** link.
3. In the *Add New License* page, fill out the necessary fields.

To facilitate entering data and minimize a chance for mistake, VeraLab allows you to request the data from a client workstation, which is currently running that application or program and fill the form automatically.

To fill the form automatically:

- In the *Add New License* page, click the **Select from Currently Running** link. The pop-up window will be displayed.
- In the *List of Running Applications* pop-up window, select a room and a workstation from the drop-down lists.
- Select a program by clicking the link with a name of process under the **Processes** column.
- The pop-up window will close itself.

You have a choice not to enforce application shutdown when maximum number is reached, but rather use software metering functionality just to record software usage. Software metering can be activated or deactivated for a particular application.

4. In order to add a different version or a platform for the same product, e.g. you would like to manage same application running on Windows and Mac platforms click **Add** icon on the right and fill out the details for an additional application mask. Same way a suite comprising

multiple applications (e.g. Adobe CS) can be setup. To delete an application mask click **Delete** icon.

Note Current method with multiple application masks was introduced in versions starting with 6.0. In order to group more than one application under same license you can list them separated by semicolons. For example, if you need to add Adobe Creative Suite license, you can add *\\Photoshop.exe;*\\Dreamweaver.exe;*\\Flash.exe in the **Path** field. This method was introduced in versions prior to 6.x. It has been retained for backward compatibility and still can be used, however we recommend using new method with multiple application masks.

5. Click **Save**.

Note If you leave **No. of Licenses** field blank, software metering will not be enforced. To restrict application from being launched, you can specify 0 in that field.

To edit a license:

1. Navigate to **License Administrator ► Licenses**.
2. Click the **Edit** icon next to the appropriate license.
3. In the *Edit License <name>* page, update the appropriate fields.
You can update the form automatically by requesting the data from a client workstation.

To update the form automatically:

- In the *Edit License <name>* page, click the **Select from Currently Running** link. The pop-up window will be displayed.
 - In the *List of Running Applications* pop-up window, select a room and a workstation from the drop down lists.
 - Select a program by clicking the link with a name of process under the **Processes** column.
 - The pop-up window will close itself.
4. Click **Update**.

To delete a license:

1. Navigate to **License Administrator ► Licenses**.
2. Click the **Delete** icon next to the appropriate license.

Software Tracking

Software Tracking feature is automatically enabled provided that you have both, server and client sides, running on version 2.4 or higher. To start tracking software, you need to follow steps from the “[Limiting Concurrent Licenses](#)” section and setting the maximum number of licenses equal or above total number of connected clients.

Starting with version 5.x, VeraLab stores price per seat and license cost information. It is further used in “[Software Compliance](#)” report to calculate license deficit and surplus.

Software Usage History

To view software usage history:

1. Navigate to **License Administrator ► Reports**.
2. Click the **Software Usage History** link.
3. In the **Software Usage History** page, select a specific application from the **Product** drop-down list or select **All** (default). Provide other optional search criteria.
4. Click **Search** button.

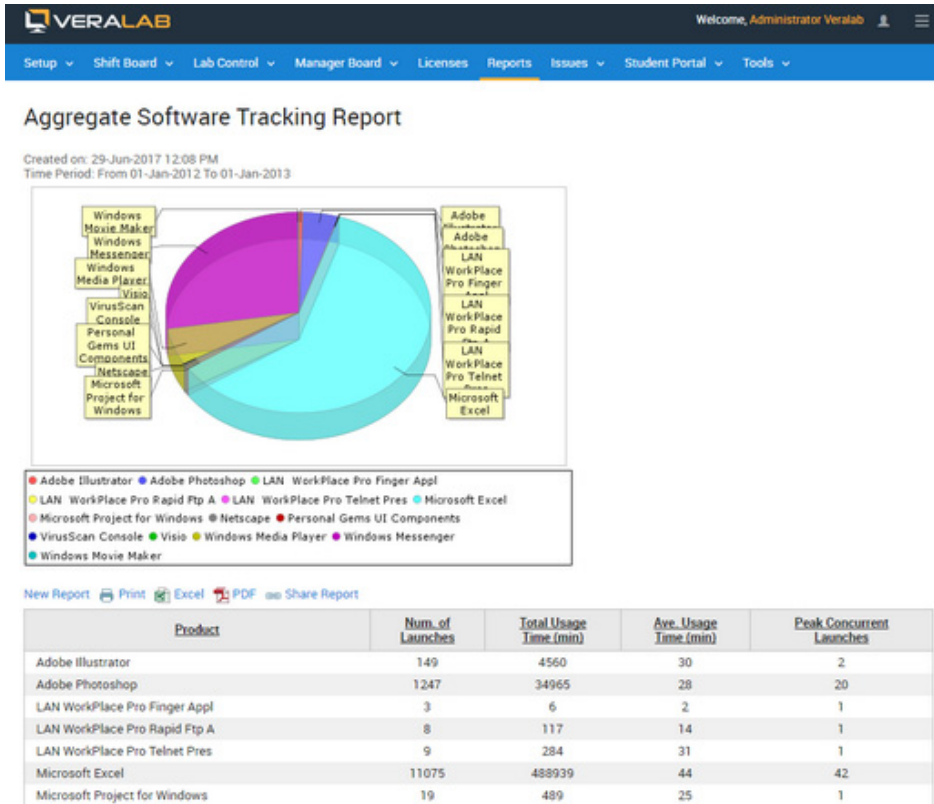
Aggregate Software Tracking Report

To view Aggregate Software Tracking report:

1. Navigate to **License Administrator ► Reports**.
2. Click the **Aggregate Software Tracking Report** link.
3. In the **Aggregate Software Tracking Report** page, specify a date range and select a room from the Room drop-down menu. Leaving date fields blank will run the report for all recorded data up to yesterday’s date.

4. Click **Submit**.

Figure 1-3: *Aggregate Software Tracking Report*



Application Usage by Users

To view Application Usage by users report:

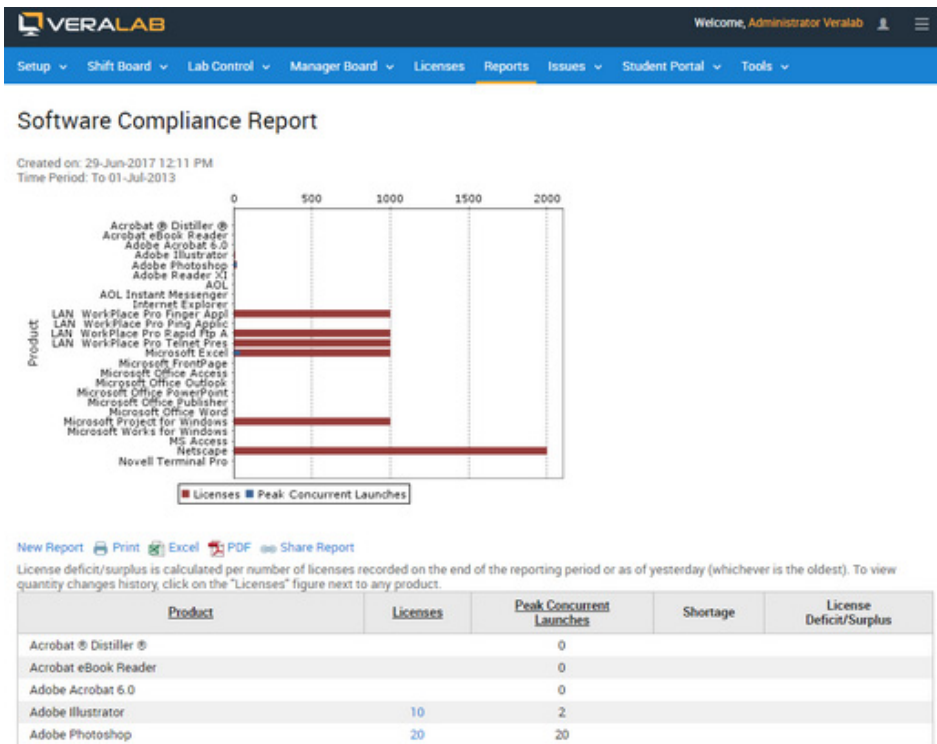
1. Navigate to **License Administrator ► Reports**.
2. Click the **Application Usage by Users** link.
3. In the *Application Usage by Users* page, select a product, a date range and a room from the **Room** multiple choice menu. Leaving date fields blank will run the report for all recorded data up to previous day.
4. Click **Submit**.

Software Compliance

To view Software Compliance report:

1. Navigate to **License Administrator ► Reports**.
2. Click the **Software Compliance** link.
3. In the **Software Compliance** page, select a date range. Leaving date fields blank will run the report for all recorded data up to previous day.
4. Click **Submit**.

Figure 1-4: *Software Compliance Report*



To view license quantity changes history, click on the **Licenses** figure next to an application

product.

Software Usage by Day

To view Software Usage by Day report:

1. Navigate to **License Administrator (role) ► Reports**.
2. Click the **Software Usage by Day** link.
3. In the *Software Usage by Day* page, select a product and a date range. Leaving date fields blank will run the report for all recorded data up to previous day.
4. Click **Submit**.

VeraLab Client Administration

VeraLab Client (also called VeraLab Guard) requires a separate installation of client software. To avoid being locked out, we recommend installing VeraLab server and VeraLab client of two different hosts. For more information about client installation, see *VeraLab Client Installation Guide*.

Client Setup

Starting with version 5.x VeraLab comes with several options to deploy and setup VeraLab client in multi-station environment. Review them carefully before selecting the one that fits your strategy best.

Before running VeraLab client installation in production environment visit **Administrator (role) ► Setup ► Stations ► Client Setup** page.

There are two ways to install and setup VeraLab client:

- using VeraLab Guard Manager Wizard (manual installation)
- using Configuration file (silent installation).

Client Setup page helps in generating Config file that can be used during silent installations. After generating Config file, save it under the same folder as VeraLab Client setup (exe) file. Client Installer will pick up parameters from the Config file. Optionally you can select to auto-register workstations on the server. If auto registration is not selected, you will need to either import stations using **Maintain Data** task under **Administrator** role before deploying VeraLab client or, if client deployment is already done, using an interface to add workstations showing in the **Unregistered Stations** list. You can install VeraLab client on a sample station and replicate the image to the rest of the room or lab using Ghost or similar methods. Here are all deployment path options:

1. Setup required **Room, Model, and Image** tasks on the server ► **Generate Config** file with **Auto-register** option selected ► Deploy VeraLab clients.
2. Setup your environment using **Import** under **Administrator (role) ► Tools ► Maintain Data**. Generate Config file without **Auto-register** option selected ► Deploy VeraLab clients.
3. Setup required **Room, Model, and Image** tasks on the server ► **Generate Config** file without **Auto-register** option selected ► Deploy VeraLab clients ► Use **Unregistered Stations** list under **Administrator ► Stations** to add all detected client workstations to corresponding rooms/models/images.
4. Setup required **Room, Model, and Image** tasks on the server ► Deploy VeraLab clients manually ► if no Config file used, VeraLab Client Setup will prompt you to specify room/model/image, server IP, and communication password.

We recommend using the same version of client and server. To download the latest version of VeraLab client please visit the **Downloads** page on www.veralab.com.

Remote Client Update

Starting with version 6.x VeraLab allows updating clients remotely. In order for this functionality to work, clients have to be on version 6.0 or higher. For example, you cannot perform remote client update from version 5.5. to 6.0.1, but you can perform client update from version 6.0 to 6.0.1.

Remote client updates can be performed for both PC and Mac platforms.

To perform remote client update:

1. Download new version of VeraLab client from www.veralab.com.
2. Copy `veralab_client_setupX.X.exe` file into `C:\Veralab\tomcat\webapps\veralab\update` directory on the server.
3. Login to VeraLab application and navigate to **Administrator (role) ► Tools ► Remote Client**.
4. Click on **New Job** link.
5. In the **Remote Client Update** page select executable you'd like to deploy and the platform. Executables must be downloaded into the client update directory on the server beforehand.
6. Select **Update all compatible stations** or **Select stations on the next step** option.
7. Click **Continue** button.
8. If **Select stations on the next step** option was chosen, make a room selection from the drop down menu and mark check-boxes of stations to be updated.
9. Click **Update** button.
10. In the **Confirm Stations Selection** page review list of stations and click on **Start Update** button to start update process.

Note Once started update process will continue even if the browser window is closed. If you need to terminate update process click on **Stop Update** button.

If client is turned off at the time when upgrade was initiated, it will start upgrade process first thing after connecting to VeraLab server. Therefore upgrade may take from several minutes to days and comprises the following cycles: new files are pulled from the server by selected and compatible PC or Mac stations as long as they are connected to the server; upgrade process is

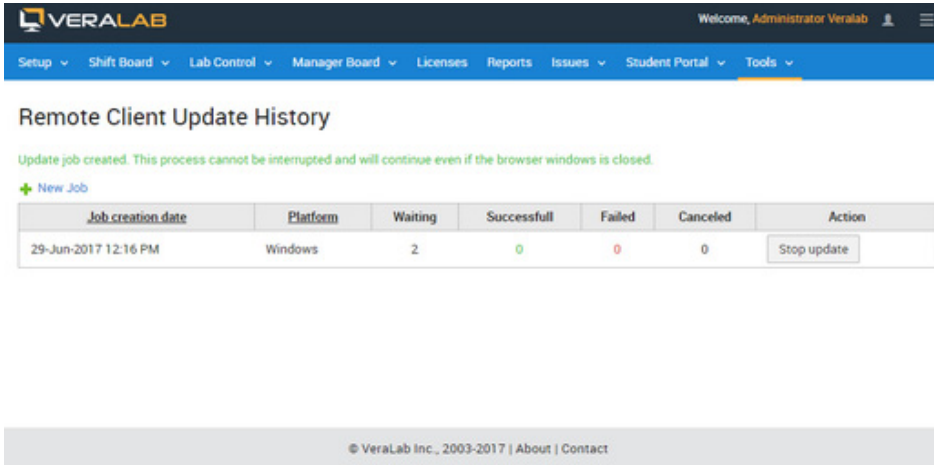
triggered by one of VeraLab events on the client, e.g. session log off/on, monitored software was started, etc.; once upgrade is completed, station will transmit its status to the server.

This is an asynchronous process and will continue until all selected stations report their status back to the server. To avoid cyclic dependencies, only one cycle of upgrade is attempted.

To view client update status:

1. Navigate to **Administrator (role) ► Tools ► Remote Client**.
2. Click on any digit to open pop-up window with status details.

Figure 1-1:



VERALAB Welcome, Administrator VeraLab

Setup Shift Board Lab Control Manager Board Licenses Reports Issues Student Portal Tools

Remote Client Update History

Update job created. This process cannot be interrupted and will continue even if the browser windows is closed.

+ New Job

Job creation date	Platform	Waiting	Successfull	Failed	Canceled	Action
29-Jun-2017 12:16 PM	Windows	2	0	0	0	Stop update

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Using VeraLab Guard (Monitoring)

VeraLab Guard was designed to control and monitor client workstations remotely. VeraLab Guard includes the following control mechanisms: *remote workstation locking and unlocking, remote user logout, restarting and shutting down workstations, wake-on-LAN, terminating client workstation processes, capturing client workstation screenshots, pulling hardware specification details from client (available only in the Diagnostics task under Administrator)*. VeraLab Guard allows sending text messages to client workstations.

Note You can use VeraLab Guard features only with client workstations that have VeraLab Guard Client installed and if the client-server connection was established. A colored two-arrow **Connection** icon indicates the status of connection. If the **Connection** icon is green, the connection is established. If the icon is red, the connection *is not* established. If the icon is grey, the connection *has never been* established or VeraLab Guard Client software is not installed.

Note Lab employees can use VeraLab Guard features only if they have been assigned corresponding rights. See [Employee Administration](#) for more information.

Note VeraLab offers optional Wake-on-LAN functionality. Check with your hardware vendor if your workstations are Wake-on-LAN ready. Wake on LAN (WoL) support is implemented in the motherboard of the computer. Most modern motherboards with an embedded Ethernet controller support WoL without the need for an external cable. Wake on LAN must be enabled in the Power Management section of the motherboard's BIOS. See “[VeraLab Settings](#)” for more information on how to enable Wake-on-LAN.

Figure 1-2: *Wake-on-LAN*

The screenshot shows the VeraLab web interface. At the top, there is a navigation menu with items like Setup, Shift Board, Lab Control, Manager Board, Licenses, Reports, Issues, Student Portal, and Tools. The main heading is "Monitoring WAB53". Below this, there is a "Select Room" dropdown menu set to "WAB53A" and a "Change Counter" button. An "Action" dropdown menu is set to "--Select --" with an "Execute" button and a "Wake-up All" icon. A status message indicates "Station status is updated automatically every 120 seconds. Last update: 29-June-2017 12:20:51 PM".

<input type="checkbox"/>	Workstation	In Use	Available	Processes	Screenshot	Wake-up	Locked	Occupied by	Session Time
<input type="checkbox"/>	WAB53S01	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input type="checkbox"/>		
<input type="checkbox"/>	WAB53S02	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S03	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S04	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S05	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S06	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S07	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S08	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S09	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S10	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S11	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S12	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S13	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S14	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S15	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S16	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		
<input type="checkbox"/>	WAB53S17	<input type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		

At the bottom of the interface, there is another "Action" dropdown menu set to "--Select --" and an "Execute" button.

Viewing and Terminating Client Processes

To view and terminate a client workstation process:

1. Navigate to **Administrator (role) ► Tools ► Monitoring**.
2. Select a counter from the list of available counters.
3. In the *Monitoring <counter_name>* page, select a room, or **All**, from the **Select Room** drop-down menu. If a counter has only one room, this step will be omitted. The screen refreshes and displays the list of workstations.
4. Click the **Processes** icon under the **Processes** column next to an appropriate workstation. A pop-up window with a list of running processes will be displayed.
5. In the *Running Processes on <workstation_name>* pop-up window, select the check boxes of the processes you need to terminate.

Note A *Terminate Client Processes* right has to be assigned to a lab employee, otherwise this functionality will be disabled. For more information, see [Employee Administration](#).

6. Click **Terminate Selected**. The window will refresh automatically and the message will be displayed in the top part of the window. After terminating appropriate processes, close the pop-up window.

Capturing Client Screenshots

To capture a client screenshot:

1. Navigate to **Administrator (role) ► Tools ► Monitoring**.
2. Select a counter from the list of available counters.
3. In the *Monitoring <counter_name>* page, select a room, or **All**, from the **Select Room** drop-down menu. If a counter has only one room, this step will be omitted. The screen refreshes and displays the list of workstations.
4. Click the **Screenshot** icon under the **Screenshot** column next to an appropriate workstation. A pop-up window with a captured screenshot will be displayed. If necessary, you can use the browser's menu to save the image.

You will notice a timestamp watermark in the top right corner of the captured screenshot.

Performing Remote Operations on Client Workstations

A number of actions can be performed remotely on workstation(s) that have VeraLab Guard and that are connected to the server.

The actions include: lock and unlock, logout, restart, shutdown.

1. Navigate to **Administrator (role) ► Tools ► Monitoring**.
2. Select a counter from the list of available counters.
3. In the *Monitoring <counter_name>* page, select a room, or **All**, from the **Select Room** drop-down menu. If a counter has only one room, this step will be omitted. The screen refreshes and displays the list of workstations.
4. To perform an action on workstation(s), select checkboxes under the **Select** column next to appropriate workstation(s). You can select all workstation by selecting a checkbox in the **Select** column header.
5. Select an action from the **Action** drop-down menu.
6. Click **Execute**.

Sending Text Messages

To send a text message to a workstation:

1. Navigate to **Administrator (role) ► Tools ► Monitoring**.
2. Select a counter from the list of available counters.
3. In the *Monitoring <counter_name>* page, select a room, or **All**, from the **Select Room** drop-down menu. If a counter has only one room, this step will be omitted. The screen refreshes and displays the list of workstations.
4. To send a message to workstations, select or deselect checkboxes under the **Select** column next to appropriate workstations. You can select all workstation by selecting a checkbox in the **Select** column header.
5. Select **Send Message** from the **Action** drop-down menu.
6. Click **Execute**.
7. In the *Send Message to Workstations* page, type a text message.
8. Click **Send**.

Maintain Data

This chapter describes VeraLab data maintenance controls and guides you through the procedures to perform data import and data purge. This chapter covers the following topics:

- [Preparing for Import](#)
- [Performing Import](#)
- [Import Troubleshooting](#)
- [Data Purge](#)

Preparing for Import

Import utility is designed to facilitate loading of setup data into the system. Import should be used only for initial setup. All further administration should be performed manually (see VeraLab Administration chapter for how-to information). If performed in production environment, all existing data will be overwritten. Contact VeraLab Support if you need to perform incremental updates.

VeraLab Import utility uses Microsoft Excel format for the source data file. The template and sample Excel worksheets are included in the distributive version of the product.

Creating Excel File

It is highly recommended to use the VeraLab template file and populate it with your production environment data. Import utility can use spreadsheet files created or edited in MS Excel versions 97-2010.

Note VeraLab does not support *.xlsx format. If you are using MS Excel 2007 or higher, save file as *.xls before running Import.

Downloading Excel Template File

To download a provided Excel template file:

1. Navigate to **Administrator (role) ► Tools ► Maintain Data ► Import**.
2. In the **Bulk Import** page, click the **Template File** link.
3. In the **File Download** pop-up window, click **Save** and choose a location on your local system.
4. Click **Save**.

Editing Excel Template File

The provided template file contains no data. The Excel file consists of six worksheets: *Users*, *Counters*, *Images*, *Models*, *Rooms*, *Stations*. Each worksheet is a table, consisting of header cells and data cells.

Note Do not modify worksheet names or header cell names.

Header cells in red color represent columns that are mandatory and must not be empty. To see additional comments or hints, select the appropriate header or data cell. You will see a yellow

text box with comments where available. Comments text box will display detailed description and acceptable range of values.

After filling in your custom data, save the Excel file. You can save the file with a different name.

Using Excel Demo File

You can use the provided demo file to test the import utility. You can use the demo file as a sample for creating your own custom data file.

Downloading Excel Demo File

To download a provided Excel template file:

1. Navigate to **Administrator (role) ► Tools ► Maintain Data ► Import**.
2. In the **Bulk Import** page, click the **Demo File** link.
3. In the **File Download** pop-up window, click **Save** and choose a location on your local system.
4. Click **Save**.

Note *Do not* modify worksheet names or header cell names.

Performing Import

Import procedure is irreversible. Prior to import, make sure you backed up all necessary data in the database.

To perform an import:

1. Navigate to **Administrator (role) ► Tools ► Maintain Data ► Import**.
2. In the *Bulk Import* page, click **Continue**.
3. In the *File Upload* page click **Browse** and locate a MS Excel file (*.xls) on your local system.
4. Click **Submit**.

If import was successful, the page will refresh and a green confirmation message 'Import completed successfully!' will be displayed.

Note If an error message is displayed, see [Import Troubleshooting](#) in this chapter for more information and troubleshooting techniques.

Import Troubleshooting

Provided import template file contains hints and internal validation mechanism to ensure data integrity. If import utility identifies integrity violations, it will display error messages and roll back the import transaction. The table below lists possible error messages and actions needed to correct errors.

Error Message	Description	Action
Internal Server Error	Internal VeraLab error.	Contact Technical Support
Error reading Excel workbook	Indicates a problem with file format.	Review the file format and MS Excel version.
Sheet '<name>' line <N>: Error adding record	Displays worksheet name that contains a non-valid record.	Review the record and verify that all values are within the specified range.
Sheet '<name>' line <N>: <Image, Model, Room, Counter, Workstation> name should be unique	Displays worksheet name and record that contains duplicate object name.	Review the record and verify that there are no duplicates in the name column.
Sheet '<name>': Error reading the header: column '<name>' is missing	Displays the worksheet name and the missing column name. Indicates the column that was deleted or renamed.	Review the template file and correct the worksheet that contains missing column.
Sheet '<name>' line <N>: Integrity constrain error, <Image, Model, Room> with name '<name>' does not exist	Indicates an attempt to add an orphan object.	Review the import file and make sure all objects have corresponding parents. See Object Hierarchy in Administrator's Guide.
Sheet '<name>' line <N>: '<column name>' name can not be empty	Displays the worksheet name and the column that contains empty data cell.	Review the template file and correct the worksheet that contains missing data.
Sheet '<name>' line <N>: Password must be at least <N> characters	Indicates an attempt to add an employee with a password, which length is less than minimum required.	Navigate to Administrator ► Settings . Click on Security Settings link and review the value for Password minimum length (char) field .
Sheet '<name>' line <N>: Duplicate Roles	Employee can not have duplicate roles.	Review the Users worksheet and correct roles assigned to employees.

Import Troubleshooting

Error Message	Description	Action
Sheet '<name>' line <N>: Id Field can not be empty	Indicates to add a record with an empty ID field.	Review the template file for records with empty ID column.

Data Purge

Starting with version 5.x VeraLab supports data purge activities. Purging historical records may be required for large environment that do not need to store data longer than certain number of years. Purging data also helps to maintain smaller size of the database which in turn improves application and reporting performance.

Warning Purging data is non-reversible operation. All purged records are physically deleted from the database.

To perform data purge:

1. Navigate to **Administrator (role) ► Tools ► Maintain Data ► Purge Historical Data**.
2. Select a date prior to which all data must be purged.
3. Select a checkbox next to desired log category(ies) to be purged, e.g. **Self-Service Logins**.
4. Click on the **Purge** button.

Figure 2-1: *Purge Historical Data*

The screenshot displays the 'Purge Historical Data' interface in the VeraLab application. At the top, the VeraLab logo and navigation menu are visible. The main heading is 'Purge Historical Data'. A warning message is displayed in a red-bordered box: 'Warning: This operation will permanently delete historical records from VeraLab database prior to selected date. We highly recommend taking full backup of VeraLab before continuing. After purge VeraLab reports will not display statistics for time periods prior to selected date. If historical records contain open end dates, they will not be purged until they are end dated. Purge operation may run for several minutes depending on the amount of historical data stored and being purged.' Below the warning, there is a 'Before Date' input field with a calendar icon. A list of log categories is shown with checkboxes and question marks: Counter Registrations (1698), Employee Shifts (3771), Class Registrations (5), Issues (21), Self-Service Logins (118349), Waitlists (7900), Software Usage (17154), and Station Availability (0). The 'Purge' button is highlighted in blue, and a 'Cancel' button is also present. The footer shows '© VeraLab Inc., 2003-2017 | About | Contact'.

System Settings

This chapter explains how to tune VeraLab settings. This chapter covers the following topics:

- [VeraLab Settings](#)

VeraLab Settings

VeraLab settings are adjustable parameters that can be tuned to reflect your business requirements. System settings are grouped into several categories, see [Managing System Settings for the categories overview](#). This appendix lists all the settings in the alphabetical order. Review the table below carefully before making any change to default values.

Setting	Default Value	Range of Values	Description
Administrator E-mail Address	admin@your_domain.edu	Any valid E-mail address	E-mail address of the person responsible for the system administration. E-mail notifications for the administrator are sent to this address.
Allow Capture Screenshots	true	true/false	Allows to capture and view client screenshots remotely.
Allow Semesters to Overlap	false	true/false	In certain cases, it may be necessary to allow overlapping semester periods.
Allow Terminate Applications	true	true/false	Allows to shutdown client applications remotely.
Allow Terminate System Processes	false	true/false	Allows to shutdown client system processes remotely.
Allow View Applications	true	true/false	Allows to view launched client applications remotely.
Client Banners Rotation Interval (sec)	20	Any positive numeric value	This setting allows to control how long (in seconds) an image stays on the client screen before changing to the next image when multiple banners are used.

Setting	Default Value	Range of Values	Description
Customize Student Portal Fields	n/a	n/a	Allows to customize which fields are visible on the Student Portal page go to Settings ► Student Portal Settings . Then Click on Student Portal Settings . Requires "Enable Student Portal" setting set to true (default). This setting is not displayed in View All Settings table.
Dashboard Refresh Interval (seconds)	180	30-30000	Defines an interval for reloading/refreshing Dashboards to display updated information.
Display Short-term Account Expiration Warning Message (true/false)	true	true/false	This setting enables or disables session expiration warning messages for short-term accounts on client stations.
Enable Admin Accounts (true/false)	true	true/false	Admin Accounts are cached on the clients and allow to login to client OS bypassing LDAP authentication or during network outage. Accounts can be created/ deleted/edited via Admin Accounts task which is available by default for users with Administrator's role.
Enable alerts for user sessions with exceeded time limit	false	true/false	If enabled, alerts will be displayed on Lab Assistant and Manager Dashboards, listing workstations and accounts where session time limit has been exceeded. See "Self-Service session limit for displaying alerts" setting

VeraLab Settings

Setting	Default Value	Range of Values	Description
Enable Authentication for clients running LDAP version of VeraLab Client	false	true/false	Enables integration of VeraLab with LDAP. Requires clients to have special version of VeraLab installed.
Enable automatic unassign on logout (true/false)	true	true/false	This setting, if enabled, will close user registration and unassign user from client workstation during logout
Enable Expiring Registrations Warning on Clients (true/false)	false	true/false	If enabled a warning message will be displayed on client workstations N minutes before registration is expired. Also see "Enable registration timeout and lock screened" "Expiring Registration Warning Time on Clients" settings.
Enable Long-Term Accounts (true/false)	false	true/false	Long-term accounts have "user" prefix followed by an automatically generated sequence number, e.g. user1, user2..userN. These accounts are not cached on the clients, thus not available if VeraLab server is not reachable from clients. They do not allow concurrent sessions, e.g. no two users with same account name may log in simultaneously. Accounts are created and edited via Mid/Long-Term Accounts task. By default, this task does not belong to any seeded role and must be added via Setup->Roles menu.

Setting	Default Value	Range of Values	Description
Enable Maintenance Account	false	true/false	Maintenance Account is used to bypass LDAP authentication and grant access to client session in situations when connection to LDAP server is broken.
Enable Mid-Term Accounts (true/false)	false	true/false	Mid-term accounts have "visitor" prefix followed by an automatically generated sequence number, e.g. visitor1..visitorN. These accounts have expiration date and not cached on the clients. They do not allow concurrent sessions, e.g. no two users with same account name may log in simultaneously. Accounts are created and edited via Mid/Long-Term Accounts task. By default, this task does not belong to any seeded role and must be added via Setup->Roles menu.
Enable Public Reports	true	true/false	This setting enables creating reports available to users via direct links without application authentication.
Enable registration timeout and lock screen (true/false)	false	true/false	This setting will enable/disable registration timeout for expired registrations, see "Maximum Student Registration Time" and "Maximum Class Registration Time" settings. Timed out registrations are automatically closed with end timestamp. Workstation screen will be also locked if "strict" locking mode is enabled.

VeraLab Settings

Setting	Default Value	Range of Values	Description
Enable room schedules integration (true/false)	false	true/false	This setting enables student portal and web services to use room schedules when publishing station and room availability
Enable Short-Term Accounts (true/false)	false	true/false	Short-term accounts have "guest" prefix followed by an automatically generated sequence number, e.g. guest1..guestN. Sequence numbers of short-term accounts get recycled at 0:00 (midnight). These accounts are not cached on the clients and do not allow concurrent logins. Accounts are created and edited via Short-Term Accounts task. By default, this task does not belong to any seeded role and must be added via Setup->Roles menu.
Enable Student Portal (true/false)	true	true/false	Enables access to read-only portal page where room schedules and LiveMaps are displayed.
Enforce Lab Assistant shifts assignment to counters	false	true/false	A counter must be selected from the drop down menu during clock in for hourly employees.
Enforce unique MAC address restriction (true/false)	true	true/false	This setting should be set to true if your Recognize workstations by is set to MAC address. If you have to maintain duplicate stations in the environment, you can set it to false to allow for multiple stations with same MAC address.

Setting	Default Value	Range of Values	Description
Expiring Class Registration Warning Time (minutes)	5	1-100	Defines when a warning for an expiring class registration is displayed.
Expiring Registration Warning Time (minutes)	5	1-100	Defines when a warning for an expiring registration is displayed.
Expiring Registration Warning Time on Clients (minutes)	5	1-100	Defines a warning timeout for expiring registrations on client workstations screens. Warning message is displayed twice: N minutes before registration expiration and 1 minute before expiration.
Expiry Notice for Registrations	true	true/false	Enables warnings for expiring registrations. Warnings are displayed on Dashboards.
I am Alive Interval (seconds)	30	5-32000	Interval of time between sending signals to server.
Idle Session Pop-up Warning Timeout (minutes)	[blank]		A warning pop-up window will be displayed after the specified time period (min). Leaving this field blank will disable warning pop-ups.
Idle Timeout (minutes)	[blank]		The system will log off a user if there is no activity within that setting time frame. To disable the feature, leave this field blank.
Inventory Notification Email	[blank]		Email notification is sent out when inventory item reaches minimum threshold limit. Multiple emails must be separated by comma. To disable the feature, leave this field blank.

Setting	Default Value	Range of Values	Description
Lock on Network Outage	false	true/false	Client workstations are automatically locked during network outage.
Locking Mode	Liberal	(None, Liberal, Strict)	Defines whether workstations are unlocked/locked automatically during sign-in/out process
Maintenance Account Username	jsmith		See Enable Maintenance Account setting.
Maintenance Account Password	nopass		See Enable Maintenance Account setting.
Maximum Class Registration Time (minutes)	480	1-1440	Maximum time, for which a class can be registered to use stations/rooms.
Maximum Length for the 'User ID/School ID' Text Fields (char)	9	1-40	Limits the number of characters which can be entered in the User ID/School ID text fields.
Maximum Number of Time Periods in Reports	12	3-36	Limits the number of time periods which can be displayed in reports. A period is a specified time frame (in months) divided by the specified step. For example, if the system is set to allow 2 periods, and, when running a report, if a step is set to 2 months, then only 4 months can be specified for the report.
Maximum Rows in CVS output file	100000	unlimited	Limits the number of records in the CVS output file in reports. Warning: high value for this setting may effect performance of your server during export operations

Setting	Default Value	Range of Values	Description
Maximum Rows in Excel output file	20000	up to 65000	Limits the number of records in the Excel output file in reports.
Maximum Student Registration Time (minutes)	480	30-1440	Defines maximum time, for which a student can use/be registered to a station.
Maximum Waitlist Time (minutes)	180	1-1440	Defines maximum time, for which a student can remain on waitlist before the warning is displayed.
Network Outage Timeout (seconds)	100	5-32000	Interval of time before client decides that there is a network outage.
Notification Expiration Time (hours)	72	Any	Defines when notifications from the notification queue expire. Expired notifications are removed from the queue.
Notification Monitor Activity (seconds)	10	Any	Defines how frequently the notification monitor checks the notification queue.
Notification Server E-mail Address	notification@your_domain.edu	Any valid E-mail address	E-mail address used as a return address in the E-mail messages sent by the notification server.
Notification Server Name	VeraLab Notification	Any alphanumeric string	The 'From' name which appears in e-mail messages sent by the notification server.
Number of Records Displayed per Page	25	3-300	Defines number of records displayed per page if a search, report, etc., return multiple records.

VeraLab Settings

Setting	Default Value	Range of Values	Description
Number of Selected Options	7	3-30	Limits the number of options, which can be selected at the same time from a drop-down list. Specifying less options may improve system performance when generating reports.
Page size for PDF printing	Letter	Letter/A4	Defines page size when exporting reports into PDF format.
Password minimum length (char)	8	Any	Specifies minimum number of characters required for users passwords.
Payroll Editable Period (days)	60	0-3000	Period, when employee's worked hours can be edited.
Payroll Session Timeout (seconds)	300	30-30000	Specifies inactivity interval after which Payroll task session times out.
Permit Launch of Metered Applications on Network Outage	true	true/false	Permits using licensed/ metered software during network outage.
Recognize Client Workstation by	Host Name	Host Name/IP Address	If your clients may change IP addresses dynamically, it is recommended to keep default value. If all your clients have static IPs, you may change it to "IP Address" value.
Registration Expiry Notice Period (minutes)	5	Any positive numeric value	Defines when a warning for an expiring registration is displayed.
SMTP Server	localhost	Any valid SMTP server name	Name of the SMTP mail server used to send outgoing e-mail notifications.

Setting	Default Value	Range of Values	Description
Search Accounts in LDAP (true/false)	true	true/false	If enabled (default), VeraLab will attempt to validate user credentials by searching both, native accounts and LDAP directory. If disabled, VeraLab will search user credentials only in native accounts directory (e.g. Admin Accounts, Short/Mid/Long Term Accounts). This setting is used by LDAP-enabled clients.
Self-Service session limit for displaying alerts (minutes)	120	Any positive numeric value	Time threshold for self-service sessions. E.g. if session time limit is set to 120 min, alerts will be displayed on Lab Assistant and Manager Dashboards. See "Enable alerts for user sessions with exceeded time limit" setting.
Server Connect Password	welcome	alphanumeric string no less than specified in Password minimum length setting	The password that is used to establish client-server connection. This password is prompted for during VeraLab client installation.
Shift Start/End Task Access List		IP addresses	Specifies list of IP addresses allowing access to Lab Assistants Shift Start/End functionality. If kept blank (default) Lab Assistants can start/end shifts from any IP address. IP addresses must be comma separated and can use CIDR notation, e.g. 192.168.12.0/23 represents the address range 192.168.12.0 - 192.168.13.255.

VeraLab Settings

Setting	Default Value	Range of Values	Description
Short-term Account Session Limit (minutes)	120	Any positive numeric value	Maximum session time duration (in minutes) for Short-term accounts. Session count starts with first log on. Short-term accounts expire at 11:59pm of each day. Short-term session is automatically logged out once session limit is reached.
Short-term Account Warning Message Threshold (minutes)	5	Any positive numeric value	This setting controls how much in advance warning messages will be displayed on the client stations.
Show Chart	true	true/false	Allows to enable/disable displaying room occupancy chart on the Student Portal page.

Setting	Default Value	Range of Values	Description
Sign-in Mode	Mixed	Mixed/Counter/ Self-Service	<p>Select Self-Service Sign-in option if you are using Active Directory or another LDAP authentication to Log On to client workstations in your environment. This option will hide all counter sign-in task tabs: Dashboard, Class Registrations, Waitlist, Manage lab, Counter Stats, Counter reports.</p> <p>- Select Counter Sign-in option if users need to sign-in at the counter before starting to use workstations in the lab. This option will hide all Self-Service task tabs: Self-service stats, Self-service reports.</p> <p>- Select Mixed sign-in option if you plan on using Counter sign-in together with LDAP authentication, e.g. if you have LDAP as a primary method of authentication, but certain stations or rooms in your lab require counter sign-in. It will show both Counter and Sign-in task tabs in the application roles.</p> <p>Requires re-login after changing.</p>
Use Websockets (true/false)	false	true/false	Please contact support@veralab.com before enabling it.
Wake on LAN Enabled	false	true/false	If pre-requisites are met, it sets waking a computer up remotely over a network connection.

VeraLab Settings

Setting	Default Value	Range of Values	Description
Wake on LAN Port	7	Any available	The destination port for the packet. Any port can be used, however the port must be open on all firewalls between VeraLab server and clients.
Wake on LAN Subnet Mask	Broadcast	Broadcast/Same Net	This setting defines whether Magic Packet is broadcasted to all subnets or only within the target host network. Keep this option set to "Same Network" if your network hardware blocks broadcasted packets.
Warning for Expiring Class Registrations	true	true/false	Enables warnings for expiring registrations. Warnings are displayed on Dashboards.
Web Session Timeout (minutes)	30	numeric value	Specifies time limit for a logged in VeraLab web application user which has been inactive for a period of time.

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