TeamDrive Registration Server Virtual Appliance Installation and Configuration

Release 5.0.2.0

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2025

CONTENTS

CHAPTER

ONE

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CHAPTER TWO

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CHAPTER

THREE

INTRODUCTION

The TeamDrive Registration Server Virtual Appliance offers a pre-installed and ready-to-run TeamDrive Registration Server suitable for deployment in a virtualized environment like VMWare.

This document will guide you through the deployment and initial installation of the Virtual Appliance and the configuration of the TeamDrive Registration Server.

This Installation Guide outlines the deployment of a single node installation, where all required components are located on the same OS instance. Please consult the *TeamDrive Registration Server Administration Guide* for recommendations about scalability and/or high availability.

3.1 Requirements

3.1.1 Required Skills

When installing the TeamDrive Registration Server, we assume that you have basic knowledge of:

- VMware: importing and deploying virtual machines, configuring virtual networking and storage (when installing the TeamDrive Server components in a virtual environment or when using a pre-installed Virtual Appliance)
- Linux system administration:
  - Adding/configuring software packages
  - Editing configurations files with a text editor (e.g. `vi` or `nano`)
  - Starting/stopping services, enabling them at system bootup time
  - Creating Linux users
  - Assigning file ownerships and privileges
  - Creating and mounting file systems
  - Setting up environment variables
- Apache HTTP Server: installation and configuration, adding and enabling modules, modifying configuration files
- MySQL Database: installation and configuration, administration/maintenance, using the MySQL command line client, basic SQL
- MTA configuration: installing and configuring a local MTA like the Postfix mail server
- Basic knowledge of application server technology

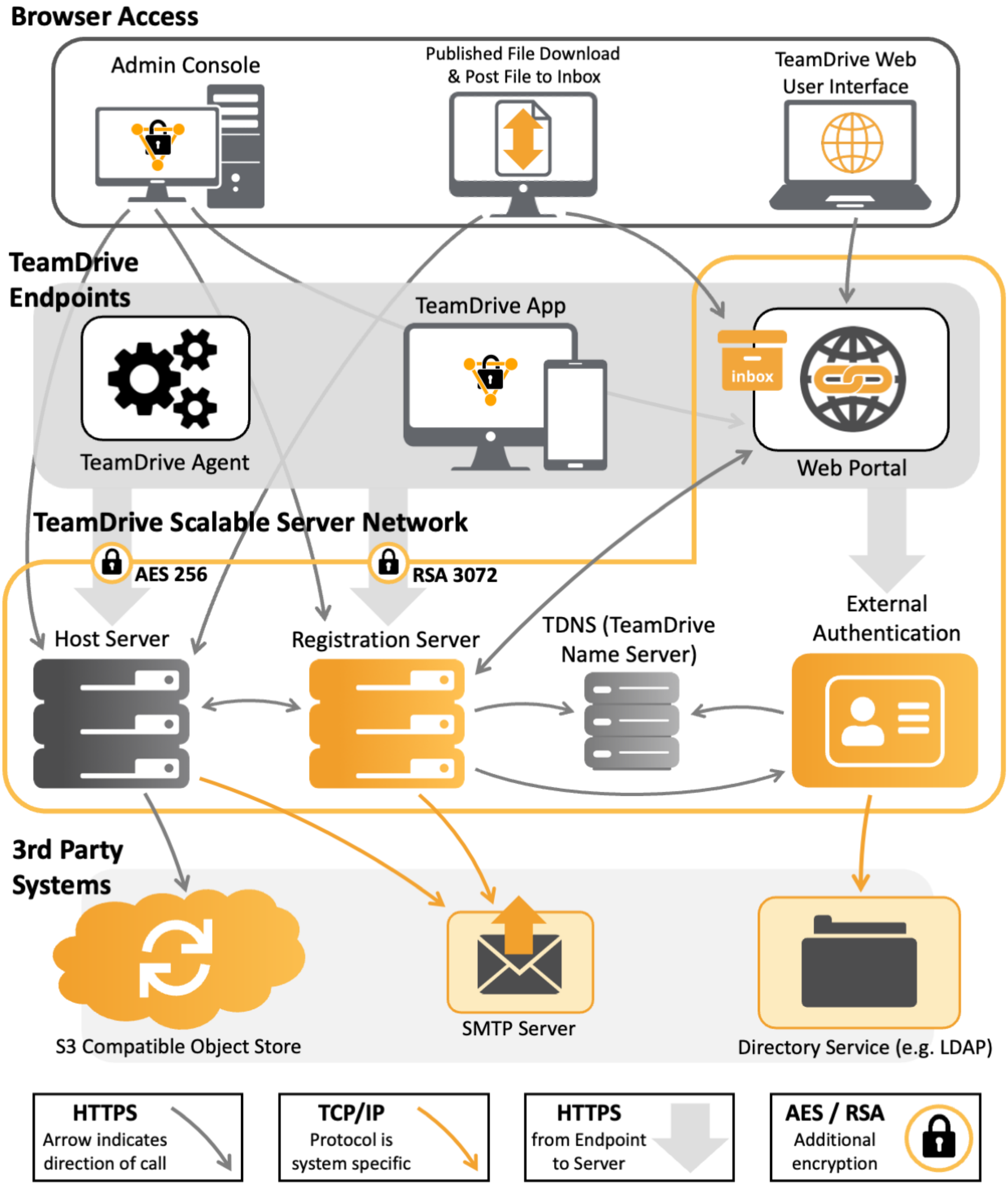


Fig. 3.1: TeamDrive Network Overview

3.1.2 Network Requirements

The system must have IP connectivity, using a fixed IP address and a resolvable fully qualified domain name. The Registration Server itself needs to be able to properly resolve host names, too.

If the Registration Server is located behind a firewall, please ensure that it is reachable via HTTPS (TCP port 443) by the TeamDrive App (Client). HTTPS access is also required for accessing the web-based Administration Console and can be further restricted to certain client (browser) IP addresses.

The Registration Server needs to be able to establish outgoing HTTPS connections (TCP port 443) to https://tdns.teamdrive.net/ and its Master Registration Server (https://reg.teamdrive.net by default), either directly or via an existing HTTPS proxy server.

For more details about TDNS, see chapter teamdrive-name-server.

For the initial registration and the exchange of cryptographic keys, the Host Server must be able to contact the Registration Server via HTTPS (TCP port 443). After the registration and activation, the Registration Server will also make calls to the Host Server API (e.g. to create new Space Depots or to query for existing Spaces for a particular user). For this purpose, the TeamDrive Registration Server must be able to establish outgoing HTTPS connections to the TeamDrive Hosting Service.

If you use External Authentication for Authenticating users, the Registration Server needs to be able to establish outgoing HTTPS connections to the host providing the external Authentication Service.

3.2 Hardware Requirements

The TeamDrive Registration Server Virtual Appliance is delivered in the form of a virtual machine image. Its main technical specifications are:

- Supported platforms: VMWare vSphere 4, 5, 6, 7 or 8 (VMWare Workstation or Oracle VM VirtualBox can be used for testing purposes)
- Minimum VM Memory: 4 GB
- vCPUs: 2
- HDD: 100GB
- Guest OS: CentOS Stream 9 (64-bit)

3.3 Main Software components

The TeamDrive Registration Server comprises the following components and modules:

- Apache Web Server 2.4
- MySQL server (8.0)
- PHP 8.3
- Yvva Runtime Environment version 1.5.9

CHAPTER

FOUR

VIRTUAL APPLIANCE INSTALLATION AND CONFIGURATION

4.1 Download and Verify the Virtual Appliance Image

A .zip Archive containing the virtual appliance's disk image and VM configuration can be obtained from the following URL:

> https://s3download.teamdrive.net/Server/TD-Reg-Server-CentOS9-64bit-5.0.2.0.zip

Download the .zip archive and the corresponding SHA1 checksum file:

> https://s3download.teamdrive.net/Server/TD-Reg-Server-CentOS9-64bit-5.0.2.0.zip.sha1

You should verify the SHA256 checksum to ensure that the zip archive is intact.

You can use the `sha256sum` command line utility on Linux to verify the integrity of the downloaded file.

For guidance on how to verify this checksum on other platforms, see the following articles:

- Apple Mac OS X: How to Check sha256 Hash of a File on Mac
- Microsoft Windows: Get-Filehash - sha256sum Windows

For additional safety, we recommend to verify the cryptographic signature of the zip archive as well.

You need to have a working GnuPG installation in order to verify this signature. The installation and configuration of GnuPG is out of the scope of this document — see the documentation at https://gnupg.org/ for details.

The public TeamDrive Build GPG key can be downloaded from here:

> https://repo.teamdrive.net/RPM-GPG-KEY-TD2024

Import the key into your keyring and double check it matches the fingerprint provided below:

```
$ gpg --fingerprint support@teamdrive.net
pub   3072R/FAFDFE49 2024-02-05 [expires: 2026-02-04]
      Key fingerprint = 3E0F A901 D96F 2B61 15FC 7A96 CEA7 D6ED FAFD FE49
uid                  TeamDrive Systems ((RPM Build Key 2024) <support@teamdrive.
↪net>
sub   3072R/F583896E 2024-02-05 [expires: 2026-02-04]
```

Each official release is signed with this TeamDrive GPG key. The signature can be obtained from the following URL:

> https://s3download.teamdrive.net/Server/TD-Host-Server-CentOS9-64bit-5.0.2.0.zip.asc

To verify the signature on a Linux operating system, the .zip and corresponding .asc file should be located in the same directory. Now run the following command:

```
$ gpg --verify TD-Registration-Server-CentOS9-64bit-5.0.2.0.zip.asc
gpg: Signature made Mo 18 Mai 2015 10:34:09 CEST using RSA key ID 9A34C453
gpg: Good signature from ``TeamDrive Systems (RPM Build Key) <support@teamdrive.net>''
gpg: WARNING: This key is not certified with a trusted signature!
gpg:          There is no indication that the signature belongs to the owner.
Primary key fingerprint: 8F9A 1F36 931D BEFA 693B  9881 ED06 27A9 9A34 C453
```

The procedure on other platforms may vary, please consult the GnuPG documentation for details on how to accomplish this task.

4.2 Import the Virtual Appliance

After you have confirmed the integrity and authenticity, unzip the zip archive.

The archive contains four files, a virtual disk image (`.vmdk`), two virtual machine description files (`.ovf`) and a manifest file (`.mf`), containing the file names and SHA1 checksums.

Import the virtual machine image according to the documentation of your virtualization technology and adjust the VM parameters (e.g. number of virtual CPUs, RAM) based on your requirements, if necessary.

Note: An import to VMWare ESXi might fail with the error:

```
Unsupported hardware family 'virtualbox-2.2'.
```

In this case use the .ovf file starting with vmx_*.ovf

Start up the virtual machine and observe the virtual machine's console output.

4.3 First Boot and Initial Configuration

Log in as the `teamdrive` user with the standard password `teamdrive` on SSH port 2021 (not ssh default port 22).

To change the default password, type in:

```
[teamdrive@localhost ~]# passwd
```

Do the same with the root user. Type in:

```
[teamdrive@localhost ~]# sudo -i
```

and use standard password `teamdrive` for the root-user authorization. Change the default password:

```
[root@localhost ~]# passwd
```

The server is configured with DNSCrypt using a list of public DNSCrypt-Server as described in dnscrypt. To change the network device and DNS, type in:

```
[root@localhost ~]# nmtui
```

4.4 Updating the Installed Software Packages

As a first step, we strongly advise to perform an update of the installed software packages. New security issues or software bugs might have been discovered and fixed since the time the Virtual Appliance has been built.

This can be done using the `dnf` package management tool. As a requirement, the Virtual Appliance needs to be connected to the network and needs to be able to establish outgoing HTTP connections to the remote RPM package repositories. To initiate the update process, enter the following command:

```
[root@regserver ~]# dnf update -y
```

dnf will first gather the list of installed packages and will then determine, if updates are available. If any updates need to be installed, the affected RPM packages will now be downloaded from the remote repositories and installed.

If the dnf update installed any updated packages, consider performing a reboot before you proceed, to ensure that the updates are activated.

Note: Performing a regular update of all installed packages is an essential part of keeping your system secure. You should schedule a regular maintenance window to apply updates using dnf update (and perform a reboot, to ensure that the system still boots up fine after these updates). Failing to keep up to date with security fixes may result in your system being vulnerable to certain remote exploits or attacks, which can compromise your system's security and integrity.

4.5 Changing the Default MySQL Database Passwords

The TeamDrive Registration Server Virtual Appliance uses the following default passwords for the MySQL database. We strongly suggest changing the passwords of the MySQL users root and teamdrive before connecting this system to a public network.

Service type	Username	Password (default)	New Password
MySQL Database Server	root	teamdrive	
MySQL Database Server	teamdrive	teamdrive	
Admin Console	HostAdmin	(defined during setup)	
GRUB Bootloader		(contact Teamdrive)	

As described in bootloader the GRUB Bootloader is protected with a password.

To change the passwords for the MySQL root and teamdrive user, please use the following commands. First change the password for the root user:

```
[root@regserver ~]# mysqladmin -u root -pteamdrive password
Warning: Using a password on the command line interface can be insecure.
New password: <new password>
Confirm new password: <new password>
```

Next, log into the MySQL database as the root user (using the new password) and change the password for the user teamdrive:

```
[root@regserver ~]# mysql -u root -p
Enter password: <new password>

[...]

mysql> SET PASSWORD FOR 'teamdrive'@'localhost' = '<new password>';
Query OK, 0 rows affected (0.00 sec)

mysql> quit
Bye
```

Note: Take note of the new MySQL password for the teamdrive user, as you will need to change some configuration files using that password as outlined in the following chapters *Configuring the Registration Server's MySQL configuration* (page 15) and *Admin Console MySQL Configuration* (page 16).

4.6 Firewall Configuration

The iptables-based OS firewall on the TeamDrive Host Server Virtual Appliance has been configured to only allow access to the following services:

- SSH (TCP Port 2021, not the default SSH Port 22)
- Secure WWW (HTTPS, TCP Port 443)
- WWW (HTTP, TCP Port 80)

If necessary, you can change the firewall configuration using the following utility:

```
[root@localhost]# firewall-cmd
```

An instructions how to configure the firewall can be found here https://www.server-world.info/en/note?os=CentOS_Stream_9&p=firewalld&f=1

4.7 Proxy Configuration

Please configure a proxy in the following config files. For dnf add in /etc/dnf/dnf.conf the following line:

```
proxy=http://<host>:<port>
```

In /opt/dnsmasq/urlhaus.sh set the proxy in the script in this variable:

```
PROXY_URL
```

For the Registration Server itself configure the proxy in the Admin Console under Admin –> Server Settings –> Proxy. The Registration Server proxy configuration is devided in outgoing connections (like for the TDNS access) which can be set in ProxyHost, ProxyPort and UseProxy and for internal connections like your Host Server in HOSTProxyHost, HOSTProxyPort and HOSTUseProxy.

4.8 Time Server

If you use an own internal time server, add the server in /etc/chrony.conf and disable the default time server and restart the service:

```
systemctl restart chronyd.service
```

4.9 Replacing the self-signed SSL certificates with proper certificates

In order to use SSL without any problems, you will need a properly signed SSL certificate (+ key) and an intermediate certificate (certificate chain) from a trusted authority.

Edit /etc/httpd/conf.d/ssl.conf and enter the absolute location of your files into the appropriate settings:

```
SSLCertificateFile /path/to/your_domain.crt
SSLCertificateKeyFile /path/to/your_domain.key
```

Depending on your certificate provider and your security needs, you probably want to set:

```
SSLCertificateChainFile /path/to/server-chain.crt
```

or:

```
SSLCACertificateFile /path/to/gd_bundle.crt
```

After saving the changes, restart your httpd and watch out for errors:

```
[root@localhost ~]# systemctl restart httpd
```

Now you can logout and proceed with the configuration via browser to register the Registration Server.

4.10 SELinux Configuration

Please note that the TeamDrive Registration Server currently can not be run when SELinux is enabled. Therefore SELinux has been disabled by setting `SELINUX=disabled` in file `/etc/selinux/config`. It is important to leave it disabled, otherwise the correct functionality of the Registration Server can not be ensured.

CHAPTER

FIVE

CONFIGURING AND TESTING THE MYSQL DATABASE CONNECTIONS

5.1 Configuring the Registration Server's MySQL configuration

If the username, password or host name to connect to the MySQL database server have been changed from the installation defaults, you need to update the login credentials used by the Registration Server's Yvva Runtime Environment.

To change the MySQL login credentials for the Registration Server's database connections, open the file `/etc/td-regserver.my.cnf` in a text editor.

The `user` field identifies the user name, while the `password` field contains the MySQL user's password in plain text:

```
#
# This configuration file defines the MySQL login credentials (e.g. username,
# password, host name) used by the TeamDrive Registration Server Apache module
# (mod_yvva), the TeamDrive Registration Server Auto Tasks (service
# td-regserver) and (optionally) the PHP-based TeamDrive Registration Server
# Admin Console. You need to restart httpd and the TeamDrive Registration
# Server background process after making changes to this file.
#

[regdb]
database=td2reg
user=teamdrive
password=teamdrive
host=localhost
socket=/var/lib/mysql/mysql.sock
```

Note: Please note that this file contains the MySQL login credentials in plain text. Make sure to restrict the access permissions to this file so that only the root user and the Apache HTTP Server (`mod_yvva` in particular) can open this file. The file ownerships should be set to `apache:apache`, the file permissions should be set to "600".

After making changes to the credentials, you have to restart the Apache HTTP Server and the `td-regserver` background service.

If you're seeing any errors at this stage, please consult the chapter *Troubleshooting* (page 27) for guidance. Double check that the MySQL login credentials are correct. Also try to connect to the MySQL database using these values from the `mysql` command line client.

5.2 Admin Console MySQL Configuration

In order to being able to manage the Registration Server, the PHP-based Administration Console needs to be able to connect to the Registration Server's MySQL Database.

By default, the Administration Console uses the same configuration file as the Registration Server (/etc/td-regserver.my.cnf), so any changes made in this file also apply to the Administration Console, if it's located on the same host as the actual Registration Server.

The location of the MySQL configuration file is specified in the configuration file /var/www/html/tdlibs/globals.php. The distribution ships with an example configuration file /var/www/html/tdlibs/globals-sample.php — just copy it to globals.php and modify it to match your environment:

```
<?php
  /*
   * This file specifies how the TeamDrive Registration Server
   * Adminstration Console connects to the MySQL database.
   *
   * Please change these settings to suit your environment, and then
   * save this file as "globals.php"
   */

  /*
   * Specify a path to a local MySQL configuration file (default).
   * If found, these values override any settings provided in $dsn2import
   * below.
   *
   * The file should look as follows (MySQL INI-style format):
   *
   * [regdb]
   * database=td2reg
   * user=teamdrive
   * password=teamdrive
   * host=localhost
   */
   $mysqlConfigFile = '/etc/td-regserver.my.cnf';

  /*
   * Alternatively, enter the connection string to connect the MySQL database.
   * Use this option if the Admin Console is installed on a separate host and
   * there's no TeamDrive specific MySQL configuration file
   *
   * The format is: mysqli://<username>:<password>@<host>/<database>
   */
   //$dsn2import = 'mysqli://teamdrive:teamdrive@127.0.0.1/td2reg';
?>
```

As an alternative to providing the location of a MySQL configuration file (e.g. when installing the Administration Console on a different host), you can define the username, password and hostname required to connect to the MySQL database server in globals.php directly, by commenting out the $mysqlConfigFile variable and updating the connection string in the variable $dsn2import accordingly:

```
$dsn2import = 'mysqli://teamdrive:teamdrive@127.0.0.1/td2reg';
```

The format is mysqli://<username>:<password>@<hostname>/databasename. The database name usually does not need to be modified (td2reg is the default name).

Note that the mysqli: protocol is being used since mysql: has been removed in PHP 7.x.

The file must be readable by the user that the Apache HTTP Server is running under, usually apache, but should otherwise be protected against unauthorized viewing (e.g. by setting the file ownerships to apache:apache and the access privileges to 600).

CHAPTER

SIX

REGISTRATION SERVER CONFIGURATION

This chapter will guide you through the initial configuration of the TeamDrive Registration Server.

The web-based setup process will perform the following steps:

- Defining the Registration Server Identity (e.g. Server Type, Server Name, Provider Code)
- Registering the Registration Server with the a selected TeamDrive Network.
- Setting up the Default Provider, including login details and contact information.
- Setup and verification of the Registration Server's SMTP configuration.

Once this initial setup has been concluded, other configuration aspects of the Registration Server can be modified using the Registration Server's Administration Console.

If you have any questions about this step, please contact your TeamDrive representative or TeamDrive support via e-mail at support@teamdrive.net.

6.1 Start the Apache HTTP Server

Start the Apache HTTP Server to proceed with the Registration Server configuration:

```
[root@regserver ~]# systemctl start httpd
```

Warning: At this point, the Registration Server's web server is answering incoming requests from any web client that can connect to its address. For security purposes, you should not make it accessible from the public Internet until you have concluded the initial configuration, e.g. by blocking external accesses using a firewall.

6.2 Start the Web Based Setup Process

From a desktop system that can connect to the Registration Server via HTTPS, start a web browser like Mozilla Firefox, Google Chrome (or any other modern web browser) and start the configuration process by opening the following URL in your browser:

> https://regserver.yourdomain.com/setup/

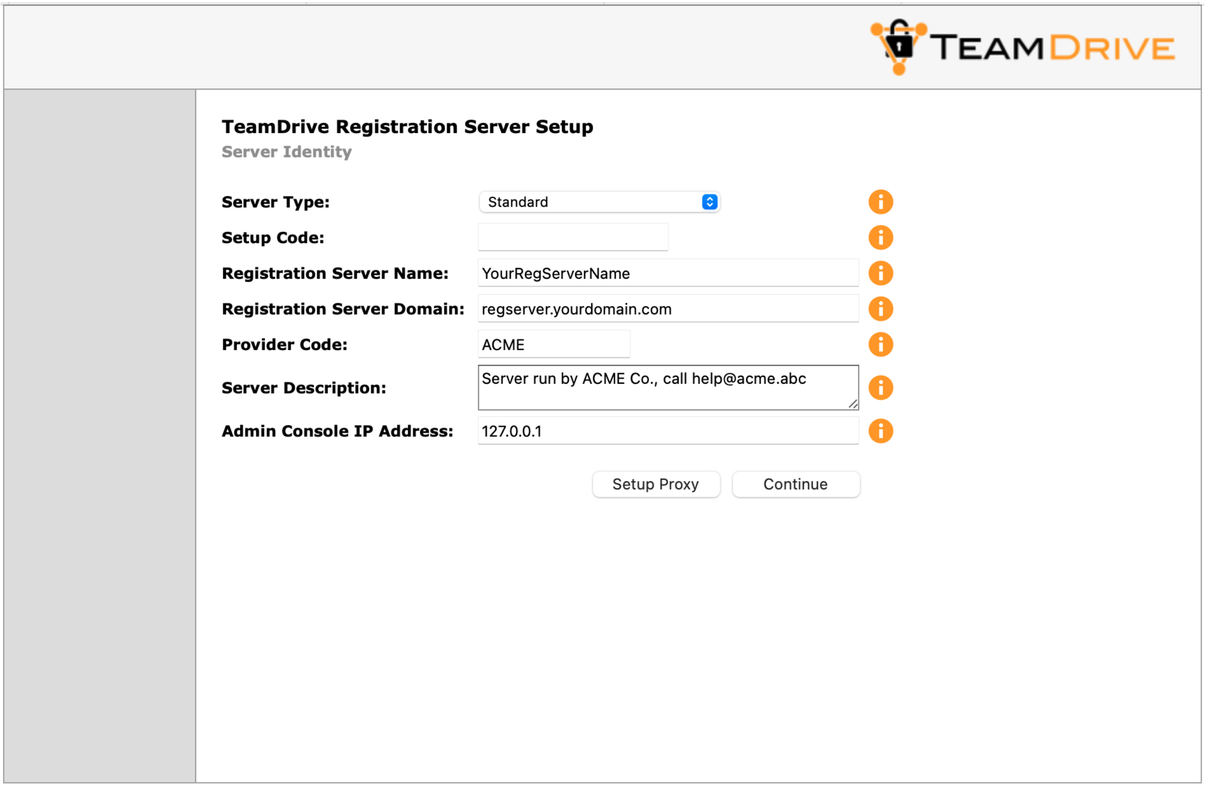
This should open the first Registration Server Setup page. If you get an error message like "500 Internal Server Error", check the log files for any errors. See chapter *Web Installation: "500 Internal Server Error"* (page 29) for details.

If you have performed a partial setup of the server before, the process will continue with the next unfinished step.

Note: If you haven't replaced the server's self-signed default SSL certificate yet, your web browser most likely will complain about an untrusted/insecure connection. Either replace the SSL certificate with an appropriate one before you proceed, or ignore this message.

6.3 Server Identity

The first step is to define the Registration Server's "identity", in particular what type of server you want to set up, the server's name and your Provider Code.



TeamDrive Registration Server Setup

Server Identity

Server Type:	Standard
Setup Code:	
Registration Server Name:	YourRegServerName
Registration Server Domain:	regserver.yourdomain.com
Provider Code:	ACME
Server Description:	Server run by ACME Co., call help@acme.abc
Admin Console IP Address:	127.0.0.1

Fig. 6.1: Registration Server Setup: Configuring the Registration Server Identity

Enter the following information in the fields provided:

Server Type Select what type of Registration Server you wish to setup. A **Standard Registration Server** is one of any number of Registration Servers in a TeamDrive Network.

A **Master Registration Server** is the single controlling server which, together with a TeamDrive Name Server (TDNS), forms an independent TeamDrive Network. If you want to setup a Master Registration Server, you also need to setup your own TDNS instance.

Note: Note that a custom TeamDrive Client is required to access an alternative TeamDrive Network.

Registration Server Name Enter the name of your Registration Server, e.g. RegServerXXXX (where XXXX is your Provider Code), or RegServerYourCompany. The name may not include spaces and must be unique for the TeamDrive Network. Consult your Master Registration Server or TDNS administrator if you have questions about selecting an appropriate name.

Registration Server Domain Name Enter the domain name of your Registration Server. This is the domain name of the Apache Web-server that will serve data to the TeamDrive Clients and must be resolvable via a public DNS.

Provider Code Enter your Provider Code. The Provider Code (aka Distributor Code) is a 4 character code, consisting of letters A-Z and 0-9. The Provider Code must be unique for the entire TeamDrive Network. Contact your Master Registration Server administrator (usually TeamDrive Systems), to for Provider Code recommendations.

Note: Do not use an **IP address** in place of a domain name for you Registration Server.

This will cause problems when trying to obtain an SSL certificate because these are not always issued for an IP address (HTTPS support is required).

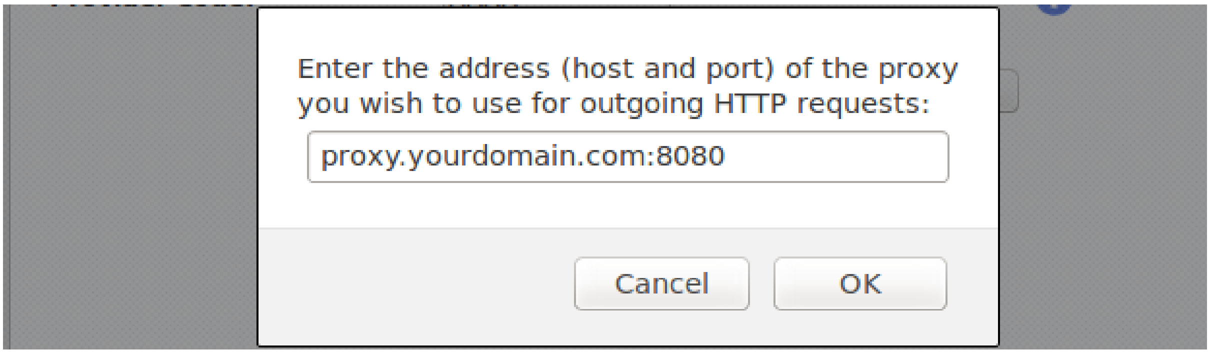
In addition, the URL of the Registation Server cannot be changed once it is in use by TeamDrive Clients. So using an IP address will make it hard to move your server (for example to another data center or even within a data center).

6.3.1 HTTP Proxy Setup (optional)

When concluding this step, the setup will submit a "ping" HTTP request to itself in order to verify that the Registration Server is reachable via the specified domain name.

The setup will also ping the TeamDrive Master Registration Server to check if it has access to the wider internet.

If outgoing HTTP requests initiated by the Registration Server are blocked by a firewall and need to be sent via a proxy server, you can configure it by clicking **Setup Proxy**.



Enter the address (host and port) of the proxy you wish to use for outgoing HTTP requests:

proxy.yourdomain.com:8080

Fig. 6.2: Registration Server Setup: Configuring the HTTP Proxy

In the popup window, enter the proxy's host name and TCP port, if required.

Note: Note that the Registration Server currently does not support proxy auto-config (PAC) files, the Web Proxy Autodiscovery Protocol (WPAD) or proxy servers that require some form of authentication.

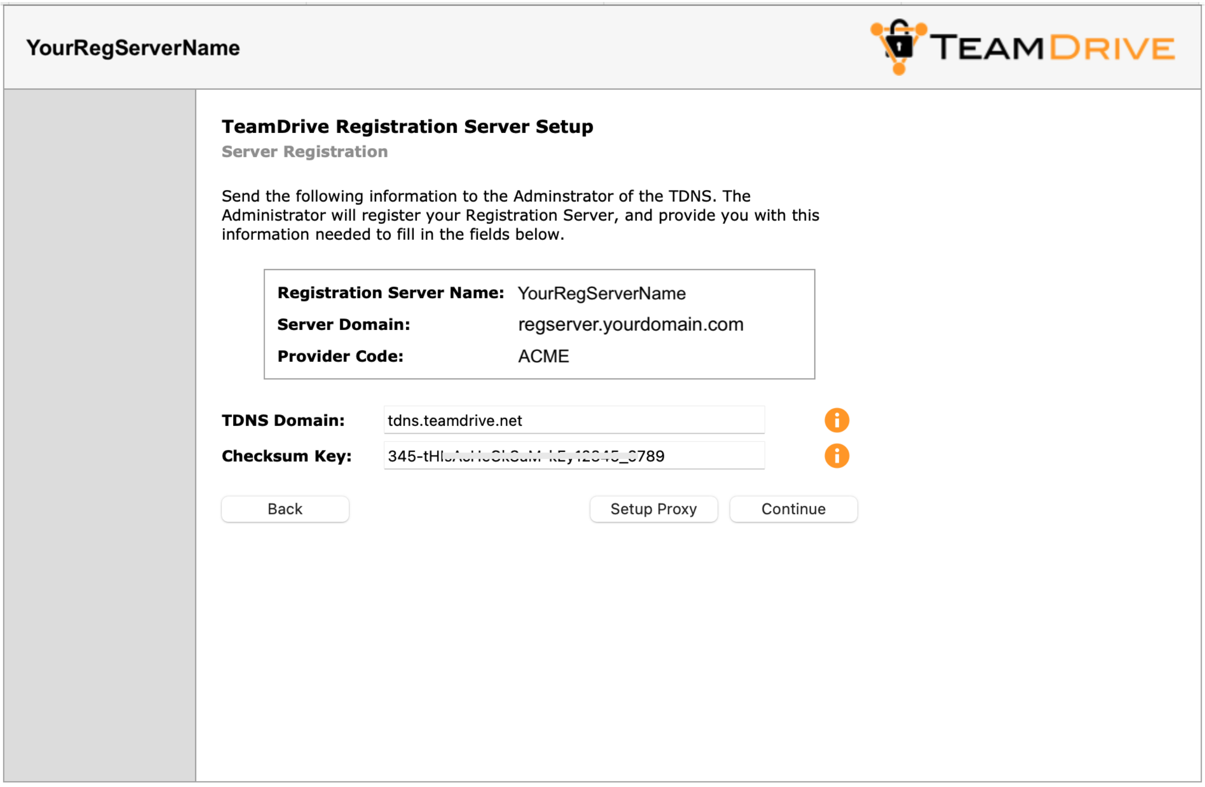
Click **OK** to save the proxy settings, or **Cancel** to abort.

Click **Continue** to proceed to the next step.

6.4 Server Registration

In this step your Registration Server will be registered as part of the TeamDrive Network which you specify by entering the domain of the TeamDrive Name Server (TDNS), as described below.

For more details about TDNS, see chapter teamdrive-name-server.



TeamDrive Registration Server Setup

Server Registration

Send the following information to the Adminstrator of the TDNS. The Administrator will register your Registration Server, and provide you with this information needed to fill in the fields below.

Registration Server Name:	YourRegServerName
Server Domain:	regserver.yourdomain.com
Provider Code:	ACME

TDNS Domain: tdns.teamdrive.net

Checksum Key: 345-tHl[redacted]789

Fig. 6.3: Registration Server Setup: Server Registration

Send the data in the box displayed on this page to then administrator of the Master Registration Server (usually to TeamDrive Systems via support@teamdrive.net).

The information, including Registration Server Name, Server Domain, and Provider Code must be sent in text form, not as a image of screenshot.

The Administrator will register your Registration Server (using the Admin Console of the Master Registation Server), and provide you with the information required to fill in the fields described below:

TDNS Domain This is the host name of the TeamDrive Name Server. By default, this is `tdns.teamdrive.net`.

Checksum Key This is a unique code obtained by the administrator on registration of a new Registration Server.

6.4.1 HTTP Proxy Setup (optional)

When concluding this step, the Registration Server will attempt to send an HTTP to the specified TDNS to verify that the server has been registered correctly.

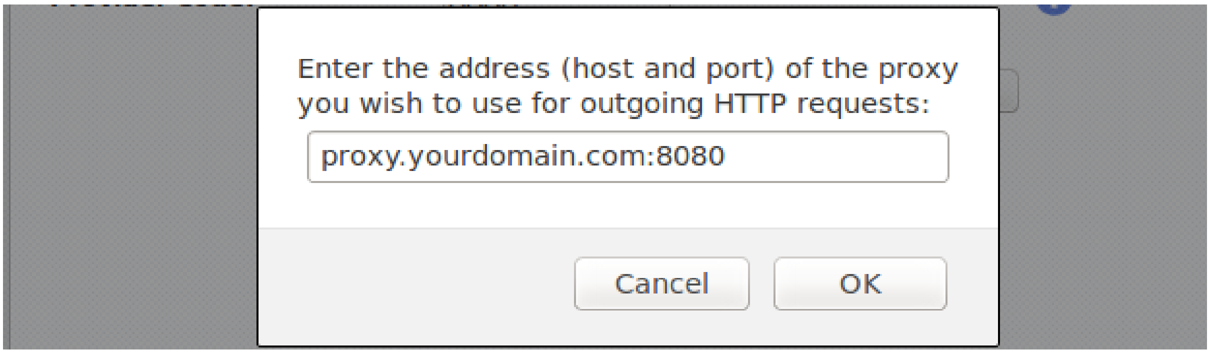
If outgoing HTTP requests need to be sent via a proxy server (and you haven't done so in the first step already), you can configure it by clicking **Setup Proxy**.

In the popup window, enter the proxy's host name and TCP port, if required and click **OK** to save the proxy settings, or **Cancel** to abort.

Click **Continue** to proceed to the next step, or **Back** to return to the previous step.

6.5 Provider Setup

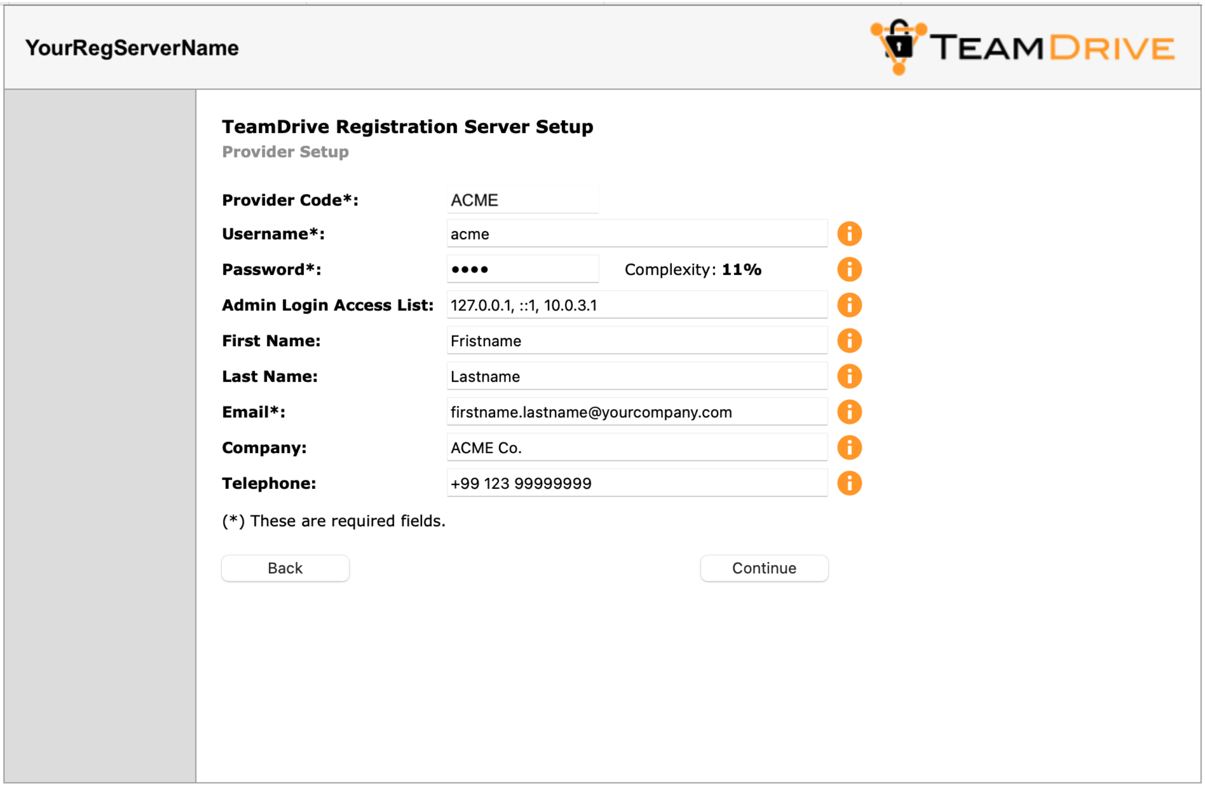
In this step, you create the user associated with your Provider / Tenant (also known as the "Default Provider" of the Registration Server). This user has all privileges required to manage all aspects of the Registration Server as



Enter the address (host and port) of the proxy you wish to use for outgoing HTTP requests:

proxy.yourdomain.com:8080

Fig. 6.4: Registration Server Setup: Configuring the HTTP Proxy



TeamDrive Registration Server Setup

Provider Setup

Provider Code*:	ACME
Username*:	acme
Password*:	•••• Complexity: 11%
Admin Login Access List:	127.0.0.1, ::1, 10.0.3.1
First Name:	Fristname
Last Name:	Lastname
Email*:	firstname.lastname@yourcompany.com
Company:	ACME Co.
Telephone:	+99 123 99999999

(*) These are required fields.

Fig. 6.5: Registration Server Setup: Provider Setup

well as all Providers hosted on this Registration Server.

Fill in your details as described below:

Username The username of the Registration Server administrator used to login to the Administration Console. By convention this is the same as the Provider Code.

Password Password of the Registration Server administrator used to login to the Administration Console.

Admin Login Access List This is a comma separated list of IP addresses of the hosts (browsers) that are allowed to login to the Registration Server Admin Console. This should include the IP address of the browser you are currently using. If the list is empty, access is allowed from any host.

First Name The given name of the Registration Server administrator.

Last Name The surname of the Registration Server administrator.

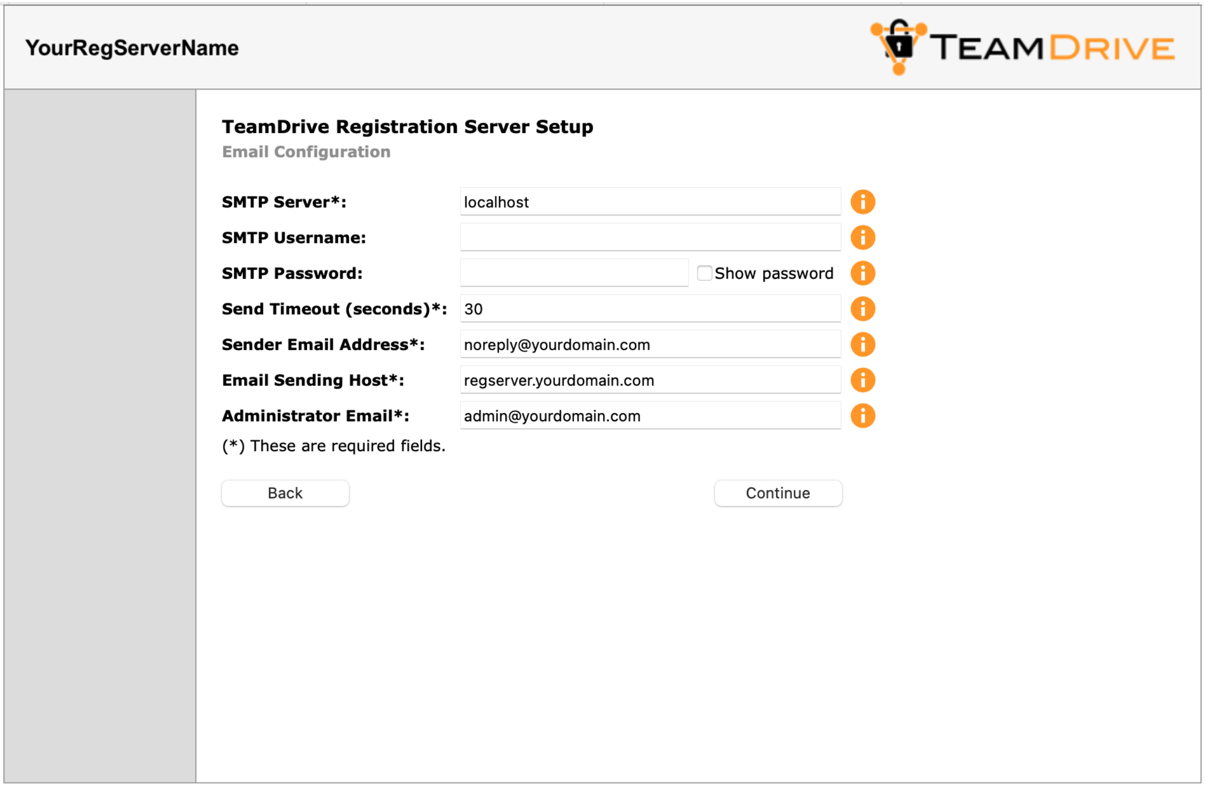
Email Address Email address of the Registration Server administrator.

Company Name The company name of the Registration Server administrator.

Telephone Telephone number used to contact the Registration Server administrator.

Click **Continue** to proceed to the next step, or **Back** to return to the previous step.

6.6 Email Configuration



YourRegServerName

TeamDrive Registration Server Setup

Email Configuration

SMTP Server*:	localhost
SMTP Username:	
SMTP Password:	□ Show password
Send Timeout (seconds)*:	30
Sender Email Address*:	noreply@yourdomain.com
Email Sending Host*:	regserver.yourdomain.com
Administrator Email*:	admin@yourdomain.com

(*) These are required fields.

Fig. 6.6: Registration Server Setup: Email Configuration

The TeamDrive Registration Server needs to be able to send out various notifications (e.g. Space invitations, License modifications) via SMTP.

In this step, you enter the required details of how the Registration Server contacts the MTA (Message Transfer Agent) and which email addresses should be used for sending out emails. Fill out the fields according to your requirements.

SMTP Server This is the host name (and TCP port) of the SMTP server used to send emails, e.g. `smtp.yourdomain.com:25`. The TCP port number can be omitted, if it's the default port for SMTP (25).

SMTP Username A username if authorization is required.

SMTP Password A password associated with the user specified above.

Send Timeout The timeout (in seconds) before an email submission to the SMTP server will be aborted, if there is no reply.

Sender Email Address This is the email address that will appear as sender in email envelope. Sometimes this address is also used as the "From" email address.

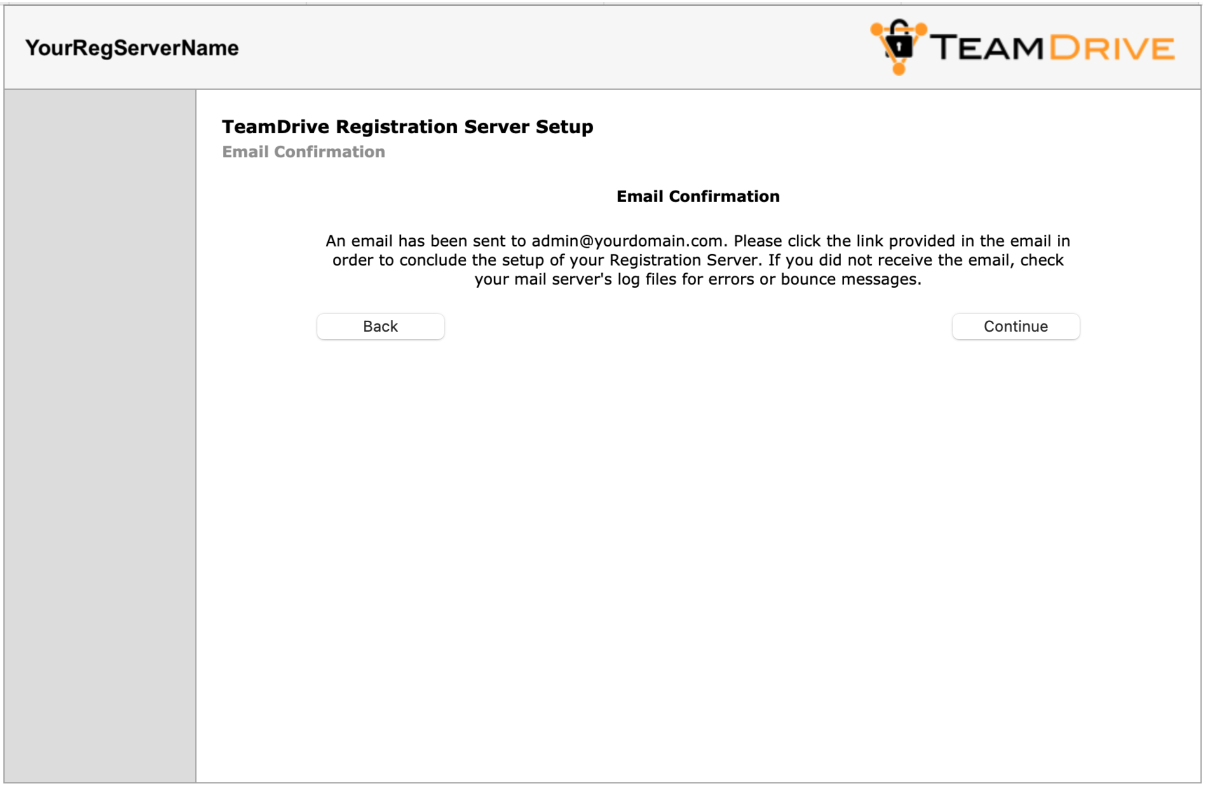
Email Sending Host This is the host name of the system that will send the email (aka the HELO host). The value should identify the system sending the email, you should use an externally addressable DNS name for this value (usually the Registration Server's host name).

Administrator Email Email address of the Registration Server administrator. This address will be used to send a test email, before the setup can be completed.

Click **Continue** to proceed to the next step, or **Back** to return to the previous step.

6.7 Email Confirmation

To test that the SMTP setup is functional, the setup process will send an email to the address you provided as the *Administrator Email* in the previous step.



YourRegServerName

TeamDrive Registration Server Setup

Email Confirmation

Email Confirmation

An email has been sent to admin@yourdomain.com. Please click the link provided in the email in order to conclude the setup of your Registration Server. If you did not receive the email, check your mail server's log files for errors or bounce messages.

Fig. 6.7: Registration Server Setup: Email Confirmation

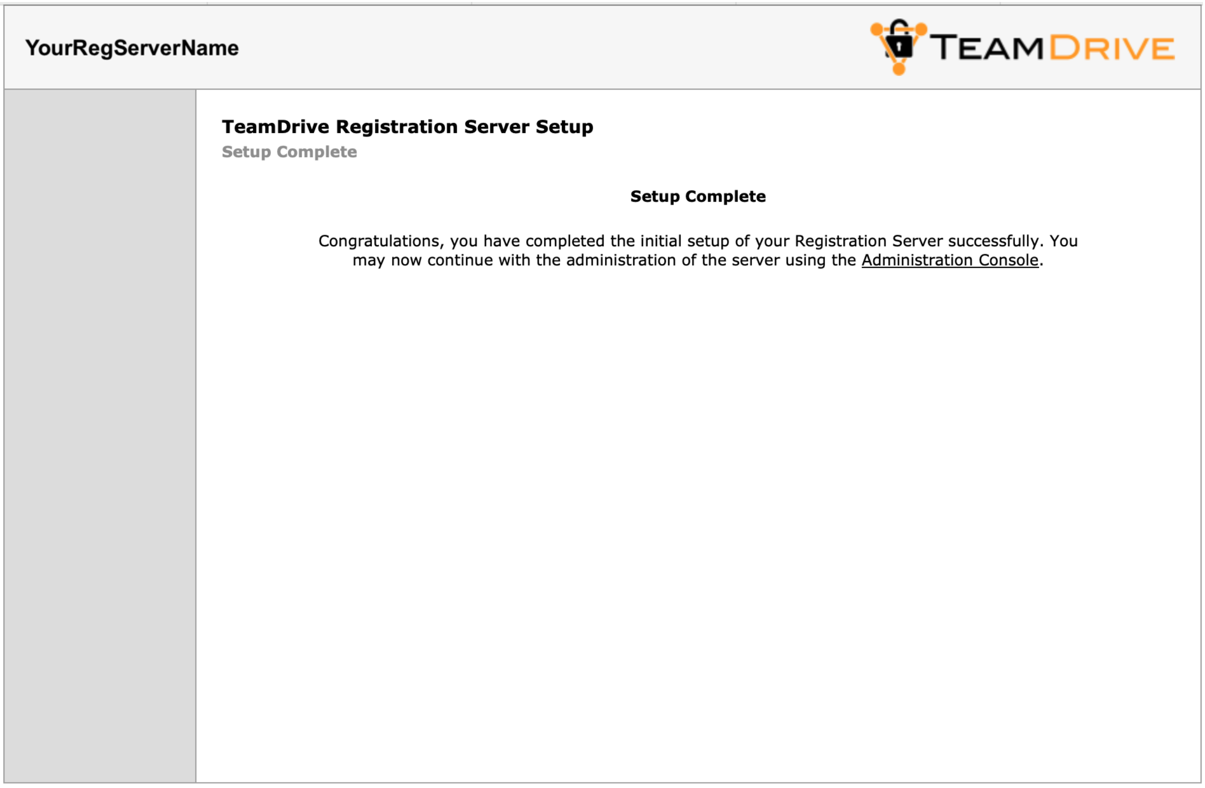
If you don't receive the email within some minutes, check your mail server's log files (e.g. `/var/log/maillog`) and the sender's email account for errors or bounce messages and adjust the SMTP server configuration accordingly.

If you received the email, the SMTP service for the TeamDrive Registration Server has been configured correctly.

Please click the link provided in the email (or copy and paste it into your web browser's address bar) in order to conclude the setup of your Registration Server.

6.8 Setup Complete

After you have clicked the confirmation link provided in the email, you will see a confirmation page.



TeamDrive Registration Server Setup

Setup Complete

Setup Complete

Congratulations, you have completed the initial setup of your Registration Server successfully. You may now continue with the administration of the server using the Administration Console.

Fig. 6.8: Registration Server: Setup Complete

At this point, you have completed the initial setup of your Registration Server successfully.

CHAPTER

SEVEN

STARTING AND STOPPING THE TEAMDRIVE REGISTRATION SERVER COMPONENTS

To make the TeamDrive Registration Server available for TeamDrive Clients to connect, the following services need to be up and running:

- mysqld — the MySQL database server (local or on a remote server)
- httpd — the Apache HTTP Server
- td-regserver — the Yvva based background processes
- postfix — the Postfix SMTP server (optional, other MTAs like sendmail or qmail or MTAs on remote servers can be used as well)

After the initial installation, most services except for the td-regserver service should already be up and running.

To ensure a proper service start and to minimize error messages on the TeamDrive Client side, the following startup sequence of the TeamDrive Registration Server components and services should be observed.

Start the TeamDrive Registration Server services in the following order:

1. Start the Registration Server MySQL databases service
2. Start the SMTP service (or make sure it's available/accessible)
3. Start the td-regserver background service
4. Start the Apache HTTP Server

For testing purposes, you can start these services manually, using the service command. In a production environment, these services should be started automatically at boot time, by enabling them via the systemctl tool.

7.1 Starting services manually

You can use the service command to start services manually:

```
[root@regserver ~]# systemctl start mysqld
[root@regserver ~]# systemctl start postfix
[root@regserver ~]# systemctl start td-regserver
[root@regserver ~]# systemctl start httpd
```

7.2 Stopping services manually

Similarly, you can use service to stop the services manually:

```
[root@regserver ~]# systemctl stop httpd
[root@regserver ~]# systemctl stop td-regserver
[root@regserver ~]# systemctl stop postfix
[root@regserver ~]# systemctl stop mysqld
```

7.3 Enabling Service Autostart

Once the TeamDrive Registration Server setup is done, the MySQL server, Apache http Server, Postfix (optional) and the `td-regserver` service need to be configured to automatically start at system boot.

Use the command `systemctl` to enable the automatic start for these processes:

```
[root@regserver ~]# systemctl enable httpd
[root@regserver ~]# systemctl enable mysqld
[root@regserver ~]# systemctl enable postfix
[root@regserver ~]# systemctl enable td-regserver
```

Note: It's important, that the MySQL service starts before the Apache will start. Edit the file:

```
/lib/systemd/system/httpd.service
```

and add at the end of the line starting with `After=` the entry `mysqld.service`. This will ensure, that the Apache will start after the MySQL service. You can verify the service start dependencies with (after a reboot of the system):

```
[root@regserver ~]# systemd-analyze critical-chain
```

7.4 Logging into the Administration Console

At this point, you can now continue with the administration and configuration of the Registration Server using the Administration Console, which can be reached via the following URL:

> https://regserver.yourdomain.com/adminconsole/

To log in, enter the login credentials of the Provider you defined in Step *Provider Setup* (page 20).

Please see the *TeamDrive Registration Server Administration Guide* for a detailed description of the Administration Console and for further details on the configuration and customization of the Registration Server and the TeamDrive Clients connecting to your Server.

Once you have concluded the configuration, start a TeamDrive Client and register a user after entering your Provider Code (or log in using a user that is provided via external authentication or via CSV import).

Consult the TeamDrive Client Documentation for usage details.

CHAPTER

EIGHT

TROUBLESHOOTING

8.1 List of relevant configuration files

/etc/httpd/conf.d/td-regserver.httpd.conf: This configuration file loads and enables the TeamDrive Registration Server-specific Apache module `mod_yvva.so`. This Apache module is responsible for providing the web-based Registration Server Installer and the Registration Server API.

/etc/logrotate.d/td-regserver: This file configures how the log files belonging to the TeamDrive Registration Server are being rotated. See the `logrotate(8)` manual page for details.

/etc/td-regserver.conf: This file defines how the `td-regserver` background service is started using the `yvvad` daemon.

/etc/td-regserver.my.cnf: This configuration file defines the MySQL credentials used to access the `regdb` MySQL database. It is read by the Apache module `mod_yvva`, the PHP-based Administration Console as well as the `yvvad` daemon that runs the `td-hostserver` background tasks and the `yvva` command line client.

/etc/yvva.conf: This configuration file contains configuration settings specific to the Yvva Runtime Environment that are shared by all Yvva components, namely the `mod_yyva` Apache module, the `yvvad` daemon and the `yvva` command line shell.

/var/www/html/tdlibs/globals.php: This configuration file defines the MySQL login credentials required for the TeamDrive Registration Server Administration Console.

8.2 List of relevant log files

In order to debug and analyse problems with the Registration Server configuration, there are several log files that you can consult:

- `/var/log/td-regserver.log`: The log file of the `mod_yvva` Apache module that performs the actual Registration Server functionality (e.g. Client/Server communication and API calls) and the web-based initial setup process. The amount of logging information can be defined by changing the value `YvvaSet log-level` in configuration file `/etc/httpd/conf.d/td-regserver.httpd.conf`. The following debug levels (with increasing verbosity) can be set: `error`, `warning`, `notice`, `trace` or `debug`. The default is `error`. Changing this value requires a restart of the Apache HTTP Server.

  This log file is also used by the `td-regserver` background service (managed by `yvvad`). The amount of logging information can be defined by changing the value `log-level` in configuration file `/etc/td-regserver.conf`. The following debug levels (with increasing verbosity) can be set: `error`, `warning`, `notice`, `trace` or `debug`. The default is `error`. Changing this value requires a restart of the `td-regserver` service using `systemctl restart td-regserver`. This log file needs to be owned by the Apache user. Logging only occurs if the log file exists and is writable by the Apache user.

- `/var/log/httpd/`: The Apache HTTP Server's log files (e.g. `error_log`) might also contain additional relevant error messages that should be checked.

- /var/log/td-adminconsole-api.log: A log file to track API accesses from the Admin Console. The location of this log file can be configured with the Registration Server setting RegServer/ApiLogFile via the Admin Console. The file needs to be owned by the Apache user. Logging only occurs if this file exists and is writable by the Apache user.
- /var/log/td-adminconsole.log: A log file to keep track of various events on the Administration Console, e.g.
  - Failed logins
  - Failed two-factor-authentication attempts (only admin console logins, not client two-factor-authentication attempts)
  - Password changes
  - Changes to security-related Provider/Server settings (login timeouts, API access lists, etc.)
  - Modifications of user privileges
  - Failed session validations

8.3 Enable Logging with Syslog

As outlined in *List of relevant log files* (page 27), the TeamDrive Registration Server logs critical errors and other notable events in various log files by default.

Starting with Registration Server version 3.5 and Yvva 1.2, it is now possible to redirect the log output of most server components to a local syslog instance as well.

Syslog support is an essential feature for auditing, security and/or compliance reasons, as it allows you to funnel all log messages into a centralized syslog server.

This makes it easier to monitor the logs for critical events or errors and prevents tampering with the log files in case of a security breach. It also helps to maintain control over the disk space utilization on the server, as growing log files can't accidentally fill up the file system.

To enable syslog support, the log file name in the log-file setting has to be replaced with the keyword syslog. Optionally, a custom process identifier can be supplied, by appending it to the syslog keyword, using a colon as the separator, e.g. log-file=syslog:my_process_identifier. If not used, the default process identifier will be used, which is the name of the program executable.

To enable syslog support for the Yvva-based td-regserver background service, edit the log-file setting in file /etc/td-regserver.conf as follows:

```
log-file=syslog:td-regserver
```

You need to restart the td-regserver background service via systemctl restart td-regserver in order to activate this change. If the log-level is set to debug you will now see log messages appearing in /var/log/messages:

```
Jun 23 14:13:43 localhost td-regserver: notice: yvvad startup
Jun 23 14:13:43 localhost td-regserver: notice: Using config file:
/etc/td-regserver.conf
Jun 23 14:13:43 localhost td-regserver: notice: No listen port
Jun 23 14:13:43 localhost td-regserver: notice: yvvad running in repeat 10
(seconds) mode
```

To enable syslog support for the Registration Server Client/Server communication and API, edit the YvvaSet log-file setting in file /etc/httpd/conf.d/td-regserver.httpd.conf:

```
YvvaSet log-file=syslog
```

You need to restart the Apache HTTP Server via `systemctl restart httpd` in order to activate this change. If the `log-level` is set to `debug` you will now see log messages appearing in `/var/log/messages`:

```
Jun 23 14:21:01 localhost mod_yvva: notice: mod_yvva 1.2.1 (May 21 2015
11:00:12) startup OK
```

To enable logging of security related Administration Console events to syslog instead of the log file `/var/log/td-adminconsole.log`, you need to change the Registration Server Setting `Security/EnableSyslog` to `True` via the Administration Console.

Click **Admin** -> **Server Settings** -> **Security** and change the **Value** for `EnableSyslog` to `True`. Click **Save** to apply the change. From this point on, security relevant events triggered via the Administration Console will be logged to `/var/log/secure`:

```
Jun 23 14:25:36 localhost td-adminconsole-log[4165]: 2015-23-06 14:25:36
[info] [/var/www/html/adminconsole/editSettings.php:38]: RegServer setting
'EnableSyslog' changed from '$false' to '$true' by user 'xxxx'
Jun 23 14:29:58 localhost td-adminconsole-log[4168]: 2015-23-06 14:29:58
[info] [/var/www/html/adminconsole/libs/auth.php:48]: Failed login for
user 'xxxx'
Jun 23 14:34:09 localhost td-adminconsole-log[4161]: 2015-23-06 14:34:09
[info] [/var/www/html/adminconsole/changePassword.php:54]: Password for
user 'xxxx' has been changed
```

8.4 Common errors

8.4.1 Web Installation: “500 Internal Server Error”

This error can be triggered by several error conditions. Check the log file `/var/log/td-regserver.log` for details.

Some common errors include:

```
[Error] -12036 (2002): Can't connect to local MySQL server through socket
'/var/lib/mysql/mysql.sock' (25)
[Error] "open TD2REG_WRITE dbms option '[regdb]';" (1)
[Error] "sql.pbt" SQL:openDBMSAndDB(387)
[Error] "startup.yv" (32)
```

The local MySQL Server’s socket file can’t be opened. This could either be a permission problem, or the MySQL Server is simply not available. Check that MySQL is actually up and running (e.g. by running `systemctl status mysqld`) and restart it, if necessary. If the error persists, check the MySQL error log file (usually `/var/log/mysqld.log`) for hints.

Similarly, an error like the following one indicates that a remote MySQL Server might not be answering (e.g. because of a firewall rule or because it’s not running):

```
[Error] -12036 (2003): Can't connect to MySQL server on
'mysql.yourdomain.com' (107)
[Error] "open TD2REG_WRITE dbms option '[regdb]';" (1)
[Error] "sql.pbt" SQL:openDBMSAndDB(387)
[Error] "startup.yv" (32)
```

If you see `Access denied` errors like the following one:

```
[Error] -12036 (1045): Access denied for user 'teamdrive'@'localhost' (using
password: YES)
[Error] "open TD2REG_WRITE dbms option '[regdb]';" (1)
[Error] "sql.pbt" SQL:openDBMSAndDB(387)
[Error] "startup.yv" (32)
```

Either the username or password used to connect to the MySQL Server are wrong. Double check that the MySQL username and password provided in `/etc/td-regserver.my.cnf` are correct, e.g. by trying to connect to the MySQL server using these credentials with the `mysql` command line client.

If you see the following error when connecting to a remote MySQL Server:

```
[Error] -12036 (1130): Host 'regserver.yourdomain.com' is not allowed to
connect to this MySQL server
[Error] "open TD2REG_WRITE dbms option '[regdb]';" (1)
[Error] "sql.pbt" SQL:openDBMSAndDB(387)
[Error] "startup.yv" (32)
```

Check the TeamDrive MySQL user's privileges on the remote MySQL server, e.g. by running ``SHOW GRANTS FOR `teamdrive`@`regserver.yourdomain.com`;`` and make sure that this user is allowed to connect to the MySQL server from the Registration Server's host.

8.4.2 Invitation emails are not being sent

If users don't receive invitation emails, there are several aspects that should be checked:

- On the Admin Console, check the "Manage Auto Tasks" page: did the task "Send Emails" succeed and was it run recently (check the value of "laststarttime"?). On the "Manage Mail Queue", do you see emails with status "Failed"?
- Is the service `td-regserver` up and running? Check with `systemctl status td-regserver` and use `systemctl start td-regserver` to start the process. Also ensure that the service is configured to be started at system bootup time. See chapter *Starting and stopping the TeamDrive Registration Server components* (page 25) for details.
- Check the `/var/log/td-regserver.log` log file for errors.
- Does sending of email work in general? Try using the `mail` utility and check your MTA logs (e.g. `/var/log/maillog`) for delivery status notifications.

8.4.3 Admin console: Error connecting to the MySQL server

If you get an error like:

```
Error connecting to the MySQL server:
Error: connect failed
```

Verify that the MySQL Server is up and running and that the connection parameters like username and password in file `/etc/td-regserver.my.cnf` are set up correctly. See chapter *Admin Console MySQL Configuration* (page 16) for details.

8.4.4 Admin console: API error code: -30000, message: Access denied to IP

If some operations on the web-based Administration Console (e.g. changing a configuration option) result in an error message `API error code: -30000,message: Access denied to IP`, the IP address of the server hosting the Administration Console host is likely not set correctly.

If this error occurs on login to the Admin Console then this value has to be changed directly in the MySQL database. In the `TD2Settings` table, search for the row where `Name = "AdminConsoleIPAddress"`, and update the `Value` column, setting it to the IP address of the Admin Console host.

It may then necessary to restart Apache or wait until the settings cache is automatically updated (see `CacheInterval`).

In the Admin Console itself the setting can be found under: "Admin" -> "Server Settings" -> "Admin Console Security" -> "AdminConsoleIPAddress".

8.4.5 Email messages sent by the registration server show encoding issues

Invitation emails and other notifications sent out by the Registration Server are encoded as UTF-8. Before they are sent out, they are first inserted into the MySQL database before the `td-regserver` background service delivers them to the configured MTA. If you notice encoding issues (special chars or umlauts not displayed properly), check the following:

- Double check that your templates are UTF-8 encoded. The default templates shipped with the TeamDrive Registration Server use the correct encoding, but if you're updating from previous versions, the encoding might be off.

CHAPTER

NINE

RELEASE NOTES - VERSION 5.0

This is the first release for CentOS 9. Version 5 for all server products, including: TeamDrive Registration Server, TeamDrive Host Server and TeamDrive Web Portal is required for CentOS 9.

9.1 5.0.2 (2025-09-09)

This release includes a number of security improvements, including certain hardening measures, please contact TeamDrive for further details.

- Added FORWARD_INVITATION_TIMEOUT Provider setting (REGSERVER-1909). This setting specifies the time (in minutes) that a forwarded Space invitation is retained, after the user that is to receive the invitation has registered. This ensures that a user will receive the invitation after registration, even after the first installation is unsuccessful for some reason (see forward_invitation_timeout for details).
- During setup, the TDNS Domain will no be set to the default: tdns.teamdrive.net (REGSERVER-1912).
- A list of "outgoing" IP addresses can now be specified for a Registration Server (REGSERVER-1906). NOTE: This feature requires TDNS version 2.6.2.

  The IP address list is used to verify the identity of calls coming from the Registration Server. Inter- Registration Server calls will now fail authentication if the IP list is set for a Registration Server and a call from that server does not include the IP address used by the server to make outgoing calls (REGSERVER-1834).

  If the outgoing IP list of the server is not set then a warning is issued if the outgoing IP address does not match the IP address of th Registration Server domain.
- Fixed forwarding of "store-forward" invitations, when the user registers on a Registration Server different the server belonging to the inviting (REGSERVER-1914).
- Fixed the "getspacedata" API call, the nested `<teamdrive>...</teamdrive>` tag embedded in the reply has been removed (REGSERVER-1915).
- Fixed loading error when both Master Registration Server is disabled, and communication with all other Registration Servers is disabled (REGSERVER-1918).
- Secure TLS connections are now supported by LDAP External Athentication (REGSERVER-1919). In the `ldap_config.php` file set `$ldap_use_tls = true;`. For example, after `$ldap_server_port` is set:

  ```
  ...
  $ldap_server_domain = "localhost";
  $ldap_server_port = "389";
  $ldap_use_tls = true;
  ...
  ```
- Fixed session based implementation of LDAP External Authentication service (REGSERVER-1922). The TeamDrive client was displaying the message "Login Failed", even after a successful login.
- Due to an incorrect database configuration the error "License exceeded permitted usage", when creating a user could lead to the user being created without a license and without a TDNS entry (REGSERVER-1901).

- Changes to the list of languages, i.e. `*_ALLOWED_LANG` Provider settings (REGSERVER-1933):
  - When creating a Provider the default language specified will automatically be converted to lower-case, and the country specifier will be removed, for example: "en-us" –> "en".
  - When creating a Provider, the `*_ALLOWED_LANG` setting will be set to "en, de, <default-lang>", where <default-lang> is the default language specified (unless default is "en" or "de").

    Note that the Regisration Server does not check if templates exist for the default language specified when creating a new Provider.
  - On upgrade to version 5.0.2, "en" and "de" will be added to the `*_ALLOWED_LANG` settings for all Providers.
- LDAP External Authentication: the value `v2,v1` for the configuration setting `$prev_user_secret_ver` is deprecated. Use `v1->v2` in place of `v2,v1`.

  Note, if `v2,v1` (`v1->v2`) has been used for quite a while (several years) then it may be possible to "upgrade" to `$prev_user_secret_ver = "v2"`. This will enable User Secret v3 generation, while still upgrading from User Secret v2. Space keys encrypted wth the Version 1 User Secret will no longer be accessable, however, the upgrade to version 2 should have largely taken place after the last few years.
- Added Provider setting `ALLOW_SPACE_NAME_STORAGE`, which determines whether the option to store Space names on the Host Server is available (REGSERVER-1932). See allow_space_name_storage for details.
- Renamed setting `StoreRegistrationDeviceIPinSeconds` to `IPAddressStoreTime` (REGSERVER-1935). The default value is 7 days. On upgrade to version 5.0.2, this value will be set to 7 days, if the setting is higher than 7 days.

  The auto-task "Delete Client IPs" has been renamed to "Remove IP Addresses", and will now delete IP addresses stored by the Registration Server, in general.

9.1.1 Admin Console

- Improved the loading time of the Edit User page in the Admin Console, and fixed other slow queries (REGSERVER-1913).
- Admin Console: Account managers are no longer allowed to remove Licenses or Depots from their accounts (REGSERVER-1908). Provider level privileges are now required to remove these objects.
- Admin Console: the User Edit page now includes a change history of the user (REGSERVER-1890). Details tracked include:
  - the user's email address (REGSERVER-1905),
  - enabling and disabling the user,
  - forced relogin and password reset,
  - enabling and disabling 2-Factor and external authentication,
  - enabling and disabling the Key Repository and Super PIN, and
  - other details such as Provider, department and language.
- Fixed the Edit HTML template tab in the Admin Console and added [[YEAR]] variable to the "ref-file" HTML template (REGSERVER-1921).
- Admin Console login, with 2FA enabled (`LOGIN_TWO_FACTOR_AUTH` set to `True`), was not working for login as a regular user (login as Provider was working) (REGSERVER-1923).
- Admin Console, changes to "Provider Settings" page:
  - Added a "Comment" field to the Provider record (REGSERVER-1842). This field may be used to describe the use or purpose of the Provider.
  - Consolidate the "Address", "PostalCode", "City" and "Country" fields into one multi-text field.

  - User with `PROVIDER-READER` privilege can now view the “Provider Settings” page.

- User, Depot or License references incorrectly set to “NULL” are now displayed and saved as an empty reference (REGSERVER-1926).
- All entries of the Admin Console event log (TD2EventLog) were not being cleaned up correctly after session timeout (REGSERVER-1936).
- Admin Console: the Super PIN and Local encryption controls at the user level will now be disabled, depending whether the Super PIN or Local encryption is required at the Account level (REGSERVER-1940).

  For example, previously it was possible to disable the Super PIN at the user level, even when the Super PIN as enabled at the Account level. This would lead to the Super PIN being disabled, and then immediately reenabled.
- Admin Console, User Edit page: the “Accounts” field now displays a dialog containing a list of “Managed Accounts” if the total number of accounts of the user exceeds 4 accounts (REGSERVER-1941). In addition, the accounts are ordered by Account number.
- Setting “Holder Email” on the Edit License page was not working (REGSERVER-1944), this has been fixed.
- Added a change history to Accounts (REGSERVER-1939). The “Change History” button in the “Super PIN” details has been removed, and the changes are now listed with all other account changes at the end of the “Edit Account” page.

9.1.2 Email Processing

- Added `FailedEmailTimeout` setting (REGSERVER-1936). Emails that have failed, bounced or been blacklisted will be removed from the Email log after the time specifed by this setting. The default is 180 days.
- If an email is set to “Soft-bounced” then the Registration Server will pause sending emails for 25 hours (REGSERVER-1902). After that the next pending email will be sent (emails already marked as Bounced will not be retried). If successful the Soft-bounced status will be removed.
- Fixed various problems with email hooks, see settings `EmailHookIPList` and `EmailHookURL` (REGSERVER-1920). The processing of calls to the email hooks from the external Email Service, and forwarding of hook calls to other Registration Servers was not working correctly.
- Fixed the missing code in the URL of the email sent to confirm a request for user account deletion (REGSERVER-1929).
- Sending emails to a user can be suspended for 2 reasons:
  - The “Bounced” status has been set for the user’s email address, and
  - there are “Email Service Errors” referencing the user’s email address.

  In both cases the Admin Consone will now indicate an Email status error and allow a “Confirmation Email” to be sent to the user (REGSERVER-1943). Previously this was only done in the case that the “Bounced’ status was set.

9.2 5.0.1 (2025-02-11)

- An expiry date may not be set on a default license. The Admin Console now enforces this restriction (REGSERVER-1883). If a license is expired you can no longer change the features or status of a license.

  Although this should never be the case, if an expired license is in use then the license features are automatically set to the default license features specified by `DEFAULT_FREE_FEATURE` or `DEFAULT_ACCOUNT_FEATURE` (if the user is a member of an account).

  Note that an expired license should never be in use because the license of a user is changed to the user’s default license when a license expires. This is done by the “Expire Licenses” auto-task.

- When deleting a user a new checkbox allows you to specify whether to send an email notification to the user (REGSERVER-1886). Previously this was determined automatically by the ADMIN_CONSOLE_SEND_EMAIL setting.

  By default the checkbox will be unchecked if the user was last active over 1 year ago. If more recently active the default for the checkbox is determined by the value of ADMIN_CONSOLE_SEND_EMAIL.

- Admin Console: the "More Info" buttons have been removed from the user and licenses lists. All information is now available from the corresponding "Edit" page.
- The "Username" field in support emails was incorrectly set to the support email address when the user has no username (REGSERVER-1877).
- The Key Repository display in the Admin Console now shows the modification time instead of the creation time of the RSA key (REGSERVER-1891?). Note that the modification time is that of the private keys associated with the RSA public key. Public keys are never changed.
- Added API functions "getspacedata" and "deletespace" (REGSERVER-1893). See documentation: getspacedata_ref and deletespace_ref.
- Fixed "permission to set domain denied" when enabling a domain on the Master Registration Server (REGSERVER-1898).
- The Admin Console will now display critical information regarding Depot storage limit overflow (HOSTSERVER-953). This includes information as to the "frozen" state of a Depot which occurs when storage limit is exceeded by a certain amount.

9.2.1 External Authentication

- Improvement to security of session based external authentication (REGSERVER-1900). An "encrypted session ID" is now used to initiate the authentication session. This ensures that no useable data appears in the Apache access log of the External Authentication Service.
- Multi-language support: TeamDrive External authentication Services now support both English and German (REGSERVER-1903).
- Fixed a problem when entering a Space marked "2FA required" on the Web Portal, when 2-Factor authentication is performed by the External Authentiation Service (REGSERVER-1887). This fix also requires a client update.

9.2.2 Licenses and Devices

- The setting InviteOldDevicesPeriodActive has been renamed to DeviceInactiveTimeout to indicate the fact that devices that have not been used for the specified period are considered generally "inactive" or not in use. Inactive devices do not receive invitations and the user will not be notified (by email) if an inactive device is disabled (or neabled) due to the device limit of a license.
- Implemented a "soft limit" option for the device limit specified by the MAXIMUM_DEVICES_PER_USER Provider setting (REGSERVER-1895). The soft limit is indicated by prefixing the value with a '~' character, for example: "~5" means a soft limit of 5 devices per user. Soft limit in this case means that the limit is only enforced if a user does not already exceed the specified limit (see maximum_devices_per_user for details).
- It is now possible to create "device based" licenses (REGSERVER-1894). These licenses may only be used by one user and limit the number of active devices of the user.

  If the number of devices exceeds the limit, access devices are disabled automatically starting with the devices the have been idle for the longest time.

9.2.3 Shop References

- Licenses, depots, users and accounts now have a "shopreference" which is used instead of the standard external reference, if the license or depot is referenced by an external Shop system (REGSERVER-1881).

For licenses, in addition to "contractnumber" the fields "constractstatus" and "contractenddate", may also be set using the API. These fields, including the "shopreference" may be set when a license is created ("createlicense" API call) or using the "setlicensecontract" API call.

The depot "shopreference" may be set using the "createdepot" and "updatedepot" API calls.

- The setting `API_ADMINCONSOLE_LIC_REF` has been renamed to `ADMIN_LICENSE_REFERENCE`.
- In the Admin Console, when editing a license or a depot, the "Change Comment" field no longer has a pre-filled value. A change comment must be entered in order to modify certain feilds of a license or depot.
- If a license has a Shop reference, changes to the license contract number will not cause an email to be sent to the license owners or users. In general, changes to the contract details will not result in an email, as it is assumed the user is aware of the changes done in the Shop.
- The following API calls now support the `<shopreference>` tag: "registeruser", "updateuser", "createdepot", "updatedepot", "createlicense", "setlicensecontract", "createaccount", "updateaccount".

9.2.4 Bounced Email Handling

A number of changes have been made to the handling of bounced emails (REGSERVER-1880):

- Once the email status of a user account has been set to "Bounced" the status can only be reset by sending the user a "Confirmation Email".

  The user must click the link in the email in order to reset the email status before the Registration Server will resume sending emails to the user. This still applies if the user changes their email address. In this case the user will first receive an associated "Email Change Confirmation" email.

- The setting `ResetEmailLimit` has been added. By default it is set to 20. The purpose of this setting is to avoid flooding the user's inbox when the status of a large number of emails is reset. This is done by setting older emails to th "PAUSED" status.

  When the user clicks in the link in the Conformation Email, all emails that have an error status are reset. If the number of emails reset exceeds `ResetEmailLimit` then the excess emails are "paused".

  The PAUSED status must be manually removed using the "Unpause Email" button available on the Email list in the user's account. They status of any email can also be reset in the global "Mail Queue", on the "View Mail Queue" page in the Admin Console.

- There are a number of new functions available when you open the Mail Queue on the "Edit User" page in the Admin Console:

  Delete All: This button will delete all emails in the user's Mail Queue.

  Delete Failed Emails: This will remove all emails with an error status, including: Send-Error, Email-Bounced, Fatal-Error, Incorrect-Address.

  If you wish to retry sending emails that are in error you must send a "Confirmation Email" to the user. See "Set Bounced Status" below.

  Unpause Emails: If you have paused emails, use this button to manually unpause up to `ResetEmailLimit` emails.

  Manage Emails...: If you have the required privileges, this will take you to the "View Mail Queue" page in the Admin Console, and display the current user's emails.

- The "Set Bounced Status" has been added to the "Edit User" page. The "Bounced" email status must be set on the user's account before you can send "Conformation Email". to the user. As described above, clicking on the link in the email will reset the status of all emails in the user's Mail Queue.
- If the email server is not reachable, the email will not remain in the "To-Be-Sent" state (REGSERVER-1882). Errors of this form include "Could not resolve host", "Host not reachable" and connection timeouts. When such an error occurs, the "Send Emails" autotask will quit, and try to send the same email again on the next run.

- Fixed a bug that resulted in the Reg Server background process hanging (infinite loop) when forwarding an email notification, if the user/email could not be found on the TeamDrive network (REGSERVER-1885).

9.3 5.0.0 (2024-08-01)

- The "standalone" version of the Registration Server is no longer supported (REGSERVER-1823). This means that a Registration Server must always be connected to a TDNS (TeamDrive Name Server) instance. The options on setup of a new server are "Standard" or "Master" Registration Server.
- A Provider may now specify that manual activation of devices is required (REGSERVER-1854). This feature enabled by setting the Provider setting; `MANUAL_ACTIVATION_REQUIRED` to `True`. See requiring_manual_activation for a detailed description of this feature.
- Added a new Provider setting: `NEW_DEVICE_NOTIFICATION_LIST` which is a list of users to be notified when a new device is installed.
- The server now supports paging when fetching a large number of keys from the Key Repository (REGSERVER-1849). This fixes problems involving accounts with over 1200 spaces, but also requires a TeamDrive Client update (TDCLIENT-3241).
- Added setting `AssumeHttpsAccess` (REGSERVER-1848). If set to `True` then the Registration Server will assume that clients are using HTTPS to connect to the server (see assumehttpsaccess for details).
- Added new email template: "public-file-download" (HOSTSERVER-905). This is sent to notify users that a public file has been downloaded.
- Changed the "From:" on license report emails from the Provider email address to the `EMAIL_SENDER_EMAIL` Provider setting (REGSERVER-1838).
- API: The <shadowkeyhash> tag is now returned by several API calls ("loginuser", "getuserdata", "registeruser", "verifyauthorizationtoken", "getinboxkeyseq", "authenticateuser") so that the caller can detect a change of the user password, or an explicit logout (REGSERVER-1850).
- Improved handling of various 2-Factor Authentication (2FA) flags (REGSERVER-1863). In general the rules are as follows:
  1. Explicit DISABLE on the account level overrides everything (but cannot disable 2FA done by the External Authentication Service).
  2. Explicit ENABLE (Email OTP, Google Authenticator or MS Authenticator) overrides everything (which means if 2FA is done by the External Authentication Service, then 2FA will be performed twice).
  3. Otherwise:
     (a) If 2FA is done by the External Authentication Service, then this disables the account level settings, but not the user level setting (see above).
     (b) If 2FA is enable on the account level, then this applies.
     (c) If 2FA is enable for Web logins only, on the account level, then will be applied.
- Added support for updating the public/private keys of old TeamDrive client installations (REGSERVER-1873). Update to client version 5.1.2 is required.
- Settings that allow the use of HTTP rather than HTTPS have been deprecated (REGSERVER-1865). This means HTTPS is now used by all URLs that reference the server and the setting `EnforceHttps` has therefore been removed.

  The Provider settings: `REG_SERVER_PROTOCOL` and `HOST_SERVER_PROTOCOL` will be removed in a future version. These settings are now hidden (not visible in the Admin Console), and are set to "https" during the server upgrade process.

These setting control the protocol used by the TeamDrive clients when accessing all Registration and Host Servers. This change ensures that there are no longer any acceptions and all clients belonging to the Registration Server will use HTTPS when accessing TeamDrive servers.

- The setting `SimulateRegServer20` is deprecated and has been removed. Compatibility with TeamDrive 2.0 clients is no longer guaranteed by the Registration Server. Please upgrade to the latest version as soon as possible.
- Fixed error: “Parameter login-url value missing” when creating a Web Portal service (REGSERVER-1847).

9.3.1 Security

- Support HMAC hashing based keys for the Host Server API access (REGSERVER-1826).
- It is now possible to set the Authorisation Type on services belonging to other Registration Servers (REGSERVER-1825). This applies to Shop and Web Portal services that are referenced using the `SHOP_SERVICE_NAME` and `WEBPORTAL_SERVICE_NAME` Provider settings.

  In other words, if you have a Shop or Web Portal that provides services to multiple Registration Servers, then the authorisation type and key can be specified separately for each Registration Server.

  The “References” column has been added to the Service list in the Admin Console, which indicates references to a service from other Providers. This column is only filled after a Registration Server update.
- Added support for Microsoft Authenticator App for users that require 2-Factor authentication (REGSERVER-1861). This feature requires a client update.
- The Registration Server no longer support the Diffie-Hellmen (DH) public/private keys, also known as DH/1.0 keys (REGSERVER-1864). Only RSA public/private keys are supported.

  In some cases this may require a TeamDrive client update to version 5.2.0. This includes:

  - some client installations from 2012 or earlier,
  - the Key Repository is enabled with a large number of keys (> 500 Spaces),
  - a large profile picture is uploaded,
  - an large activity report is sent via email by the client.

9.3.2 External Authentication

- You can now specify that an External Authentication Services performs Two-facter Authentication (2FA). In this case the Registration Server will not perform 2FA when the user’s account is set to 2FA required (REGSERVER-1815).
- External authentication now supports “session based” login (REGSERVER-1851). Using this method, the TeamDrive App redirects to the Auth Service, and then use a (previously obtained) session ID to verify whether the login is successful. This removes the need for an embedded browser in the TeamDrive Desktop App.
- External Authentication: when accessing a Authentication Service that does not return the service name (in the verify authentication token reply), then the Provider setting `DEFAULT_AUTH_SERVICE_NAME` must be set.

  Note that this is only the case when dealing with an Authentication Service that has not been upgraded (or cannot be upgraded) to the latest version.

9.3.3 Administration Console

- A column “Referenced By” has been added to the list of Services on the “Manage Domains & Services” page. This column contains a list of Providers that reference the service.

- It is now possible to disable access to the Admin Console for a specific Provider (REGSERVER-1853). When disabled, no user or administrator of the Provider is allowed to login to the Admin Console.
- When deleting a user you can now add a comment (REGSERVER-1827). This will appear in the change history of users in the Admin Console.
- Fixed listing of Spaces on the “Edit Depot” Depot page (REGSERVER-1837).
- Fixed the “Move Space” dialog on the “Edit Depot” page which was returning an when the Depot owner was entered (REGSERVER-1870).
- Fixed the output of the “Edit Auto Task” page.
- Removed certain incorrect entries from the Depot “Change History” (REGSERVER-1839).

CHAPTER

TEN

RELEASE NOTES - VERSION 4.7

10.1 4.7.1 (2023-12-19)

- External Authentication on the Admin Console was not working due to hardening measures for browser cookies. This has been fixed without relaxing the cookie restrictions (REGSERVER-1820).
- Fixed the problem that the Web Portal login was not working when dealing with an unregistered user that required external authentication (REGSERVER-1814).

  By regiestering an email domain it is possible for the TeamDrive App to determine if a user should use external authentication, even when the user not yet registered on a TeamDrive Registration Server.

  This was not working when a user logged in for the first time on a Web Portal.
- External Authentication Services now handles referrer URLs that includes "search args" (REGSERVER-1812). This allows the caller of the service to add search args that are automatically returned after successful login.
- Fixed a problem with the registration of Outlook Addins (REGSERVER-1811).
- Added ENABLE_PORTAL_PAGES Provider setting (REGSERVER-1806). Set this value to True if you are using the Web-based login service of the Registration Server. By default this value will be True if USE_AUTH_SERVICE is True.
- Admin Console: on the "Edit Provider" page, the checkbox regarding depot storage and traffic limit change notifications now has an info icon which includes a list of Provider managers that will receive email notifications (REGSERVER-1785).
- The "search" API call was not always returning the user's public mod number (REGSERVER-1805). In addition, the public mod number must be incremented when the Provider changes. This all ensures that the change is propagated to the Host Server correctly.
- Improved Key Repository display in Admin Console, and added a button to undelete spaces (REGSERVER-1780).
- Fixed a bug: the Registration Server was returned an "Invalid username" during Host Server registration (REGSERVER-1804).
- Admin Console: Fixed the "Select All" button on the "Edit Group" page (REGSERVER-1797). The "Add Member/s" button has been moved to the end (REGSERVER-1796).
- When external authentication fails because of an incorrect reply from the Ext Auth Service, the Registration Server will now dump the text of the reply to a temporary file (REGSERVER-1799). To indicate this, a log entry of the following form is created:

```
<time> <pid> [Error] VERIFY FAILED: Provider=<code>, URL=https://..., reply␣
↪dumped
to file: /tmp/ext-auth-reply-...
```

- When moving a user to another Provider, the default Depot of the user is now always moved with the user, if the user is owner of the Depot (REGSERVER-1800), even if the depot is also belongs to an account.

As before, all other depots that are owned by the user and also belong to an account, remain with the account, and the user is removed as owner.

- Admin Console: fixed/improved the "Change Provider" dialog:
  - The option to create a new default depot was not working.
  - When changing the Provider selection, the checkbox selection was reset.
  - Improved the description of effect of the dialog options.
- Admin Console: Added a trashcan icon which can be used to remove customising images from an account (REGSERVER-1798). Clicking the trashcan will remove the image immediately (no need to press "Save").
- Admin Console: the "Background Task" status indicator no longer requires the console to be running on the same machine as the Registration Server (REGSERVER-1801). Further changes:
  - The status indicator includes the "last active" time of the background task.
  - The indicator is only displayed if you have Provider level privileges.
- Admin Console: in the "Edit Depot" page, the Depot history is now supports paging (REGSERVER-1803). Comments containing "magic usernames' are converted to email addresses where possible.
- Fixed the "Synchronise TDNS" Task error: "413 Request Entity too Large" (TDNS-32). Added `UsersPerSyncCall` setting which determines the number of users sent per request when synchronising the user list with TDNS. The default is 500 which prevents error above.
- Admin Console: login now possible even if TDNS is not reachable (REGSERVER-1817).
- Removed deprecated Provider setting: API_ALLOW_CHECKSUMERR (REGSERVER-1824).

10.2 4.7.0 (2023-07-31)

- All license modification and expiry notification emails are now sent to the license owner or the managers of the account of the license (REGSERVER-1781).

  License notifications are also sent to the Provider, if a "License Email" address has been set.

  License expiry notifications will still be sent to the users of a license, but only if the license has less than 10 users. Users that are also owners or managers, will not receive 2 emails.
- An error in the removeaccountfromlicense() API call has been fixed, that cause a "Cursor required" error (REGSERVER-1791).
- LDAP external authentication has been updated to run with PHP 8 (REGSERVER-1787).
- Managers of an account can now be designated as "non-commercial" (REGSERVER-1778). Non-commercial account managers may not make purchases, change contracts or view invoices in the shop associated with the account. The button to change this status is only visible if the Provider setting `SHOP_ENABLED` is set to `True`.

  NOTE: If at least one manager is marked as non-commercial in an account, then any manager added to the account will be marked as non-commercial by default.
- Added "notification" template (REGSERVER-1775). This new template is used when a notification message is sent directly from the client. It uses the following three template variables:

  > `[[SUBJECT]]` - The subject sent by the client. `[[NOTIFICATION-TEXT]]` - The text of the email as sent by the client. `[[NOTIFICATION-HTML]]` - The text sent by the client with line feeds (n) replaced by `<br>`.
- Added the `ISOLATED_INVITATION_ZONE` Provider setting, which specifies a group of Providers as a comma separated list of Provider Codes (REGSERVER-1771). When set, users of the Provider cannot invite anyone that is not a user of one of the Providers in the group. In addition users of this Provider cannot be invited by users of Providers not in the group.

- Changed default greeting (see “Email Templates / TRANSLATIONS / greetings in the Admin Console) in emails to: “+” or “Sehr geehrte(r) [[BRAND]] Anwender(in)” in German.
- The setting `EnableDomainSupport` has been removed. The domain and services functionality is now always enabled (REGSERVER-1737).
- Added `CheckUserLimit` global setting which is the limit (per day) to the number of users that can be checked as to whether they exist or not.
- Added Provider setting: `ALLOW_CREATE_GROUP`, which determines whether groups can be created by account managers or other users (REGSERVER-1735).

  This setting can only be modified by users with SUPER-USER privileges (i.e. a manager of the default Provider).

  The setting can be overridden by a setting at the account level, which allows the SUPER-USER to individually enabled or disable group creation for managers at the account level.
- Added Provider settings:: `ADMIN_CONSOLE_SEND_EMAIL` and `SHOP_SEND_EMAIL`. The setting determine if email notifications are sent by default. The default value of `ADMIN_CONSOLE_SEND_EMAIL` is `True`. By default `SHOP_SEND_EMAIL` is false, but is automatically set to the value of `API_SEND_EMAIL` on upgrade.

  `ADMIN_CONSOLE_SEND_EMAIL` applies to email notifications sent by the Admin Console, and `SHOP_SEND_EMAIL` applies to notifications sent by “Shop” type services. `API_SEND_EMAIL` now applies to API calls not made by the Admin Console or Shop services.

  Note that the `SHOP_SEND_EMAIL` and `API_SEND_EMAIL` settings are ignored in the case of depot configuration change notifications (REGSERVER-1458). In other words, emails sent using the “webdepotchange” template sent by the “createdepot”, “deletedepot”, “selectdepotforuser”, “removedepotfromuser” and “setdepotforuser” API calls. In this case, the default is always `False`.
- Expanded service types to include: “Endpoint”, “Shop” and “Web Portal” in addition to “Authentication” (REGSERVER-1637). See *Upgrading to New Services* (page 45) below.
- Added `REDIRECT_SUPERPIN` Provider setting. The SUPERPIN page provides information about the Super PIN functionality for the enduser. It explains its usage and the consequences of activating the Super PIN. By default the “redirect-superpin” HTML template is returned when this page is requested.
- The “searchuser” API is now restricted to returning users that are owned by the caller. In addition, additional information required by the Web Portal about the Provider is returned in a `<userdist>`, when `<userdist>` tag is specified in the request.
- Added `TEMP_PASSWORD_LENGTH` and `TEMP_PASSWORD_CHARACTERS` setting which allow you to determine the form of the temporary password sent via email when changing your password (REGSERVER-1680). See login_settings for details.
- Removed the following settings: `TDNSAutoWhiteList`, `TDNSBlackList` and `TDNSWhiteList`. This information is now stored on TDNS and can be modified in the Admin Console on the “Admin / Manage Servers” page.
- Setting `LoadBalancerURL` has been removed. This setting has been replaced by the value of `RegServerURL`. On upgrade the value `LoadBalancerURL` must be identical to *RegServerURL*‘.
- The server now records all logins in a “Login Trace Log” (REGSERVER-1667). The login history can be viewed in the Admin Console on the Edit User page.

  The new server setting `LoginTraceStoragePeriod` specifies the time the log entries are maintained (by default this is 90 days). The new auto task “Remove Expired Resources” deletes entries that are older than the specified retention period.
- A new template variable: `[[LOGIN-TRACE]]`, can be used in the “too-many-failed-logins” email template (REGSERVER-1686). This variable contains a list of previous login activity. For example:

```
Web Portal: 2022-05-16 12:49:45.00 [::ffff:127.0.0.1] Login Failed
Web Portal: 2022-05-16 12:49:42.00 [::ffff:127.0.0.1] Login Failed
Web Portal: 2022-05-16 12:49:29.00 [::ffff:127.0.0.1] Login Failed
```

```
Desktop:    2022-05-16 11:46:53.00 [127.0.0.1] Email OTP Correct
Desktop:    2022-05-16 11:43:12.00 [127.0.0.1] Login OK, 2-Factor Auth. Required
Desktop:    2022-05-16 11:42:57.00 [127.0.0.1] Login Failed
```

The new "translate.txt" file contains translations for the text generated above in a similar way to the "greetings.txt" file contains translations for the `[[GREETING]]` template variable.

- When a depot storage size or traffic limit is changed by the Registration Server a email notification will now be sent to the depot owner and users (REGSERVER-1687). In the Admin Console the manager can determine if the email is sent or not when saving changes. By default, the email will be sent if the Provider setting `API_SEND_EMAIL` is `true`. For this purpose 2 email templates were added: "depot-storage-changed" and "depot-traffic-changed".
- Add functionality for shortening URLs to be used by the TeamDrive client (REGSERVER-1632). If not empty, the server setting: `ShortURLPrefix`, specifies the prefix of the URL generated. By default the Registration Server will be referenced by the short URL. When accessed, the caller of the shortened URL will be redirected to the original URL.

  Shortened URLs have a timeout specified by the new server setting: `ShortURLTimeout`. By default this is 90 days. Set `ShortURLTimeout` to 0 (zero) means short URLs never expire. The "Remove Expired Resources" auto task deletes expired short URLs.
- Documented disabling the default Apache index page in `/etc/httpd/conf.d/welcome.conf`, by changing: `ErrorDocument 403 /.noindex.html` to `ErrorDocument 403 default` (REGSERVER-1630). See apache-setup-and-configuration.
- Fixed a problem with line endings in very old PBPG key documents (REGSERVER-1786). Yvva runtime version 1.5.18, is required to fix this.

10.2.1 Administration Console

- Admin Console: fixed the "Add Depots to Account ..." button on Edit User page (REGSERVER-1782).
- Account managers can now request domain registration (REGSERVER-1717). The managers of the account will receive an email notification when the domain registration is either accepted or rejected.

  To request registration, and email is automatically sent to: domainrequest@teamdrive.com.
- The Admin Console is now compatible with PHP 8.1 (REGSERVER-1727).
- The Admin Console now uses simplified URLs (REGSERVER-1716), and allows direct links to objects, for example: ../adminconsole/account=46.

  After login the Admin Console will display this page if you have the right to view the page. And, after logout the Admin Console will display the last page you were on.
- Removed the **Create New Task** button on the "Manage Auto Tasks" page.
- When moving a user to a new Provider, you can now select an account for the user, if the user is already a member of an account (REGSERVER-1610).
- Links directly to depots and spaces on the Host Server are not provided by the "Open Host Admin" buttons (REGSERVER-1364). This feature requires Host Server version 4.1.

  You will be required to login to the Host Server each time you use the link, unless you set `LinksRequireLogin` to `True` on the Host Server.
- When deleting a user that belongs to an account, the manager now has the option to transfer the depots owned by the user to the account (REGSERVER-1678).
- A history log of deleted users is now shown on the "Manage Users" page (REGSERVER-1678).
- A "Send Account Configuration" button to the "Edit Account" page, which can be used to sent an email containing a summary of the account configuration to all account managers. The sender will also receive a copy of the email (REGSERVER-1733).

- Two-factor authentication will no longer be requested twice when both Admin Console 2FA (LOGIN_TWO_FACTOR_AUTH=True) and personal user-level 2FA is required (REGSERVER-1743).

10.2.2 Upgrading to New Services

Version 4.7 of the Registration Server expands the concept of services to include all types of “endpoints” in the TeamDrive distributed system. This includes the types: “Endpoint”, “Shop” and “Web Portal” in addition to “Authentication”. See services for more details.

On upgrade services certain Provider settings will used to automatically created corresponding services, and remove duplications:

- AUTH_LOGIN_URL and VERIFY_AUTH_TOKEN_URL will be used to create an Authentication Service, or to identify an existing Authentication service with the same URLs. The (new) Provider setting AUTH_SERVICE_NAME will then be set to the name of the service.
- SHOP_LANDING_PAGE and API_IP_ACCESS will be used to create a Shop Service (or identify an existing service with the same URL) and SHOP_SERVICE_NAME will be set to the name of this service for the Provider.
- WEBPORTAL_API_URL and API_WEB_PORTAL_IP will be used to create a Web Portal Service (or identify an existing service with the same URL) and WEBPORTAL_SERVICE_NAME will be set to the name of this service.

All new services will be given default name, which can be changed later. However, you must remember to update the associated *_SERVICE_NAME setting in this case, as this is not done automatically.

The Provider settings used to create the services: AUTH_LOGIN_URL, VERIFY_AUTH_TOKEN_URL, *SHOP_LANDING_PAGE*‘, API_IP_ACCESS, WEBPORTAL_API_URL and API_WEB_PORTAL_IP are deprecated and no longer used by the Registration Server.

The settings: AUTH_SERVICE_NAME, SHOP_SERVICE_NAME and WEBPORTAL_SERVICE_NAME now reference the default service of that type for the Provider, and each service references a unique physical endpoint connected to a Registration Server in the TeamDrive network.

In addition, services now have individualised authorisation methods and keys. By default, this methods will use the global key stored in the setting APIChecksumSalt and MD5 hashing.

For security reasons we recommend upgrading to one of the other methods: **MD5 (Endpoint specific key)** or **HMAC-SHA1 (Endpoint specific key)**. See api-access for details.

CHAPTER

ELEVEN

RELEASE NOTES - VERSION 4.6

11.1 4.6.5 (2023-03-07)

- Fixed login error: "The email address is used be a number of users, ...". Which occurred when using an old TeamDrive client and user with identical username and email.

11.2 4.6.4 (2022-11-04)

- Fixed a bug which allowed the use of domains reserved by an account to be use by a user not in the account, when changing the user's email address (REGSERVER-1722).
- Remove unnecessary newlines (n) in a number of email templates (REGSERVER-1724). We assume that the email clients will wrap long lines in text emails as required.
- Admin Console: the confirm deletion dialog for depots was not working.
- Admin Console: account managers can now add the Depots owned by user's of the account to the account.
- Admin Console: it is no longer possible to remove a Depot from an account if the Depot is set to the account default (REGSERVER-1714). The API will also prevent a Depot that does not belong to the account to be set to default.
- It is no longer possible to set the default account license to a license that does not belong to the account, or remove a license from an account that is set to the default (REGSERVER-1713).
- Admin Console: when creating a new account user, the account default license is first assigned to the user, and then the selected license, if any (REGSERVER-1712). This prevents a user from being created if there is an error with the account default license (such as the license is disabled or does not have sufficient users), even if a valid license was selected during creation.
- On login to the Admin Console the Registration Server was sometimes sending a blank OTP in the email.
- Added email templates: **removeuser-request** and **removeuser-confirmed**, and the HTML template: **removeuser-confirmed** (REGSERVER-1705). This is to support the "Rmove User Account" function in the TeamDrive client. Using this function the user can request deletion of their user account and Space data.

  Upon request a **removeuser-request** email is sent to the user containing a link which can be used to confirm deletion. If clicked the **removeuser-confirmed** email is sent to the Provider of the user requesting manual deletion of the user.
- Added the `AdminConsoleURL` global setting, which specifies the URL of the Admin Console if it is different to `RegServerURL` (REGSERVER-1710).
- Admin Console: hitting the ENTER key in a text field in edit forms not longer activates the HTML defined default submit button (REGSERVER-1704). This prevent unwanted actions.
- An unregistered user with a registered domain associated with a external authentication service was not always redirect to the authentication service on login (REGSERVER-1709). This was only working if Provider settings was referencing the same external authentication service.

- Updating license features when no feature bits were previously set was not working (REGSERVER-1702).
- The getregserverlist() API call now returns a specific registration server that must be named.
- The getaccountdata() API call now returns the account flags relating to local encryption, 2FA, and the Super PIN repository.
- The Provider code in the TeamDrive client DISTRIBUTOR file was not used during registration (REGSERVER-1692). Users were incorrectly assigned to the default Provider.
- Fixed a bug when using a TeamDrive Clients version 4.6 or earlier, that caused the error "The specified user is registered on a different Registration Server", during login (REGSERVER-1695).
- The Registration Server will now check for the error: 454 Temporary authentication failure, when sending emails (REGSERVER-1693). This error is handled as if the SMTP server is not reachable. This mean the server will retry sending the same email until it succeeds, or a different error occurs.
- Fixed recognition of the following SMTP errors: 550 Invalid dns, 550 Mailbox unavailable, 550 User unknown. These error cause the email address to be "blacklisted", which means emails are no longer sent to this address. The email address is marked as "bounced" in the user account. This status can be viewed and modified in the Admin Console.
- Added `EnforceHttps` Registration Server setting (REGSERVER-1696). This setting is `True` by default.
- Added the Provider settings: `REG_SERVER_PROTOCOL` and `HOST_SERVER_PROTOCOL` (REGSERVER-1696). Possible values for these settings are `https`, `http` and `default`. They are set to `https` by default, which forces clients to use HTTPS for all communications.
- Depot storage and traffic limit notifications via email are now sent to Provider administrators (this includes users with "PROVIDER-MANAGER" rights) as well as the account managers, and depot owner (REGSERVER-1698).

  In the Admin Console, a checkbox is available so that users can opt-out of receiving these emails.
- Added `TEMP_PASSWORD_LENGTH` Provider setting which determines the length of a temporary password. Default is 6 characters long.
- The portal page login provided by the Registration Server now supports Email OTP (REGSERVER-1689). Added the **portal-login-otp** HTML template page which is used to submit the OTP and complete login.
- Added support for registering Outlook Add-ins for users that use external authentication (REGSERVER-1700). The email template: **device-otp**, was added which is used to send a one-time password used to complete registration.

11.3 4.6.3 (2022-03-24)

- It is now possible to retrieve previously deleted private keys from the Key Repository. This can help to regain access to Space Keys if a mistake is made when upgrading the external authentication encryption, or when disabling the Super PIN.
- The list of users on the Edit License page is now displayed in standard table form (REGSERVER-1601).
- When removing a user from an account that is both member and manager, you can now select to remove the user as either a member of a manager (REGSERVER-1646).
- The Add Member and Add Manager dialogs now limited to 1000 users in order to shorten the load time for the dialogs (REGSERVER-1666). Users will be prompted to use the filter function if necessary.
- In the list of license users, the Provider Code of users with a Provider different to that of the licenses are highlighted in red (REGSERVER-1600).
- When adding a license to an account, the dialog list now also displays the "holder email" and the license limit and usage (REGSERVER-1634). Filtering is still only done on the first column which includes the license number and the owner (if any).

- You can now set an inbox user without also setting an inbox URL, but the URL is still required for the inbox to work (REGSERVER-1663). Setting an inbox URL without an inbox user is not allowed.

  In addition, the inbox user must have a license with the Agent or Inbox feature. Using a TeamDrive hosted inbox requires an the Inbox license feature.

- Added loginfailed() API call which is used by the Web Portal to count the number of invalid logins.
- The `RedirectorProtocol` setting is now "https" by default. In addition, if "http" is specified then this protocol will only be used if a redirect URL is not explicity set to the HTTPS protocol.
- When deleting a user that is the owner of a depot, the Registration Server now correctly removes the reference to the user from the depot. In particular in the case where the depot also belongs to an account (REGSERVER-1681).
- Login to the Admin Console with an email address used by more than one user will now work correctly (REGSERVER-1679). Which user is selected is unspecified, provided the password is correct.

  After login, check the username of the logged-in user to determine which user has been selected. Use the username of the user rather than the email address in order to login as one of the other users, with the same email address.

- Fixed the search() API function which must return the email address of a Provider, when requested to the Host Server.
- Implemented support for OAuth 2.0 and OpenID external authentication (REGSERVER-1691).
- Handle clients that no longer support the Diffie-Hellmann based PBPG 1.0 keys due to incompatibilities in OpenSSL 3.0 (REGSERVER-1688).
- Admin Console: fixed perfomance problem when displaying the user Key Repository statistics (REGSERVER-1690).

11.4 4.6.2 (2011-12-16)

This release also includes a number of security improvements, please contact TeamDrive for further details.

- Fixed issue with portal page login that resulted in a "Decryption failed" error.
- The Admin Console now returns ambiguous error on login, if the username/email or password is incorrect (REGSERVER-1669). This is also the case if the user does not have the permission to login to the Admin Console, or if access is only allowed from specific IP addresses.

  In the case of the Lost Password function, when a temporary password is requested the server will always return with the message that a temporary password has been sent, not matter what the input.

  Users will not be warned that the Lost Password functions is not supported when logging in as a Provider.

  All errors during login are logged to the td-adminconsole.log file. Check this log file, if a user is having a problem during login.

- Added `FailedLookupLimit` and `FailedLookupPeriod` settings which limit the number of failed lookups for security reasons, during login or when inviting users (REGSERVER-1662).

  The settings `LookupRetensionTime`, `CalculatedLookupMaximum`, `RecentLookupMaximum`, and `LastLookupNotification`, allow you to control and monitor the number of allowed failed lookups.

- Added auto-task "Manage Failed Lookup" which calculates the maximum failed lookup rate over the last 48 hours. This task runs every 4 hours and resets the `RecentLookupMaximum` value.
- the "prelogin", "connect" and "lookupemail" API calls have been updated to not provide information as to the existence of a user. However in the case of "prelogin" and "connect", this breaks the TeamDrive client.

  As a result, the changes will only be made mandatory when an update to the TeamDrive client has been made generally available.

- Added support for two-factor authentication for user login on the Admin Console (REGSERVER-1674).

11.5 4.6.1 (2021-09-30)

This is a security update.

- A number of security issues have been fixed, please contact TeamDrive for further details.
- yvva 1.5.11 is required which includes measures to prevent “Log Poisoning” by encoding r and n characters (YVVA-52).
- Added `REDIRECT_SECURITY` Provider setting. The SECURITY page explains how to join a space that has certain security requirements (REGSERVER-1665). The “redirect-security” HTML template is returned by default, when this page is requested.
- Admin Console: Fixed dialogs on Manage Domains & Services page.

11.6 4.6.0 (2021-08-31)

The 4.6 release includes several security bug fixes and a number of hardening measures, and is recommended to all users.

Please contact TeamDrive for further details.

Version 4.6 is an in-place upgrade to all previous versions of the server.

- Initial public release of 4.6.
- OS hardening and security update to Apache configuration.
- Set security headers in Apache configuration (REGSERVER-1654).
- Updated to the latest versions of PHP database and network libraries.
- Email verification improved.
- Number of support files/logs is now limited.
- The `TDNSURL` setting has been change from “http” to “https” by default (REGSERVER-1639). On update a once-off update will change any existing HTTP URL to HTTPS for this setting. Administrators must be aware of this change in case there is a disturbance in the communication with TDNS as a result. Note that HTTP access to TDNS has been deprecated and will be disallowed at somme point in the future.

  External authentication services are also required to use HTTPS to contact TDNS.
- The “support-notification” emails will not be sent with “From:” and “Reply-To:” headers set according to the value of the `FROM_EMAIL_OPTIONS` setting (REGSERVER-1633).

  The default value for the `FROM_EMAIL_OPTIONS` setting, has been changed to `replyto-via`. The default was previously `user`, which should no longer be used as email servers reject unknown from email addresses.

  Note that the `SUPPORT_EMAIL` must now be set to a valid email address in order to receive support uploads.
- Added the server setting: `WebPortalAPICalls` which specifies the API calls that can be made by the Web Portal (REGSERVER-1636).
- It is now possible to override the Provider Web access setting, `ALLOW_WEB_PORTAL_ACCESS` at the account and user level (REGSERVER-1615).

  For this purpose the options of this setting have been changed to: `permit`, `deny`, `permit-by-default` and `deny-by-default`. The previous setting value `peruser` is equivalent to `deny-by-default`.

At the account level, web access can be disabled, if it is enabled or permissable at the Provider level. In other words if `ALLOW_WEB_PORTAL_ACCESS` is set to `permit`, `permit-by-default` or `deny-by-default`.

See allow_web_portal_access, for more details.

- Added an new email priority level (REGSERVER-1613): All emails that the user is actively waiting for (in particular, during login) now have top priority, this includes:

  > web-activationlink, web-activationsetpassword, web-activationwithnewsletter, web-emailchangedtonew, web-newpassword, confirm-email, new-passwd, reg-activationlink, reg-activationsetpassword, reg-activationwithnewsletter, reg-emailchangedtonew, too-many-failed-logins, two-factor-auth, recovery and authentication-code.

  As before, the lowest priority is assigned to notification emails sent by the TeamDrive client. All other emails, including invitations is given medium priority.

  All emails of a higher priority are sent before the emails of a lower priority. This means the lower priority emails will only be sent once the rate at which high priority emails are send drops below the overall email send rate (see emailsendrate).

- Account managers can now select a license as the "account default license" (REGSERVER-1611). All users added to the account as a member, will be automatically assigned this license, provided the user is currently using a default license (i.e. a license assigned by the Provider using the `DEFAULT_LICENSEKEY` setting, or the user's own default license created using the `DEFAULT_FREE_FEATURE` setting).

  When a member using the account default license is removed from the account, the default license is revoked from the user.

  If the account default license is changed, the license is not revoked from user's that have already been assigned the license. However, if a user has been invited to the account and is scheduled to receive the account default license, this license assignment will be cancelled.

- When a user that belongs to an email domain that is registered by another Registration Server, is invited to a space, the server will now redirect the client to the other Registration Server, where the user may be created as a "guest" (REGSERVER-1606).

  In addition, the **inv-newuser-invited** email template has been changed so that, if a user created on invitation uses external authentication, then the user will receive an activation link instead of a set password link (see templates_for_client_actions).

- Admin Console: it is now possible to "ping" the Host Servers from the Server management page (REGSERVER-1551). When this is done the Registration Server will also check the Host Server version, and the expiry date of the SSL Certificate, Provider the HTTPS protocol is used to access the Host Server (see `API_USE_SSL_FOR_HOST` Provider setting).

- Added new email template, "depot-frozen", and other functionality to notify the user of depot exceeding the storage limit, this includes the template variables `[[LASTACCESS]]` and `[[DISKMAX]]` (HOSTSERVER-795).

- In the Admin Console you can now set the default for snapshot usage on a depot. This function is only available if it is supported by the Host Server which must be version 4.0 or later.

  This setting only affects whether snapshot are enabled or not for new spaces created in the depot. Existing spaces are unaffected by changing this setting.

- Admin Console: It is now possible to specify a list of "inbox listeners" on accounts that have an inbox. Inbox listeners receive an email notification when files are uploaded to the inbox (REGSERVER-1590).

- Added support for 2-factor authentication (2FA) based on a OTP (one-time password/PIN), sent via email (TDCLIENT-3100). A new email template, "authentication-code", is used to send the OTP. This email contains links to the HTML templates: **login-confirmed** and **login-error**.

  Email based 2FA can be enabled for individual users in the Admin Console on the Edit User page.

  Alternatively, 2FA can be enabled at the account level, for all members of the account. If for some reason 2FA is not required for some individual users of an account then the account setting can be diable at in the

Edit User page (REGSERVER-1612). In this case it is always possible for the user to re-enable 2FA, in the TeamDrive client.

- The Registration Server also supports 2-factor authentication using the Google Authenticator App (REGSERVER-1598).

  The latest TeamDrive client allows you to enable email OTP or Google Authenticator based 2-factor authentication for a user.

  In the Admin Console you can to disable 2-factor authentication that has been enabled by the user.

- Admin Console: devices can now be filtered by “Client Type” (REGSERVER-1586).
- The server will now return an error when trying to register an Outlook Add-in, and the user already has `MAXIMUM_OUTLOOK_ADD_INS` (default is 1) registered, if the client specifies the `<uniquedevice>` tag (REGSERVER-1566). Without the tag, the server will delete an existing Add-in device, in order to make place for the new device, as before.
- Added support for Microsoft Teams (REGSERVER-1571):

  Two new templates have been added, “ref-file” and “ref-decompose”. The first is an HTML template, and the second is a JSON template (which can be edited like other HTML templates).

  The “ref-file” template is returned in response to a “file reference” URL, which has the following form:

  https://<reg-server-domain>/yvva/ref/teamdrive/<file-global-id>?<search-args>

  The following search args are optional: size, space and file.

  The second is returned in response to a “decompose” HTML POST, which has the following URL:

  https://<reg-server-domain>/yvva/ref/decompose.json

  The POST body has Content-Type, “application/json”.

  The file reference URL is generated by the TeamDrive client when a reference to a TeamDrive file is embedded in a Microsoft Teams communication (for example a chat).

  The decompose POST is done by the Microsoft Teams server, and is used to decompose the file reference URL. The response JSON is used to generate a “card” which is used to embed the file reference in the communication, in a branded form.

- TD2User.ClientSettings was set to nulls allowed, but in some databases this column may be NOT NULL, so NULL values will no longer be stored in the column (REGSERVER-1622).
- `API_USE_SSL_FOR_HOST` is now set to `True` by default.

CHAPTER

TWELVE

RELEASE NOTES - VERSION 4.5

12.1 4.5.5 (2020-01-27)

- Fixed the collation sequence on the TD2APIRequests.User column (REGSERVER-1592).
- Admin Console: Only Host Servers that are owned by an account must be excluded from the list when creating a depot (REGSERVER-1589).
- Added `REDIRECT_FUSE` Provider setting. The FUSE page should provide information about downloading and installing FUSE, which is used by the TeamDrive client to create a virtual drive for spaces (REGSERVER-1587).
- Added the "redirect-fuse" HTML template which is returned by default when the FUSE redirect is requested by the client, if `REDIRECT_FUSE` has not been set to a specific URL. In general, if an HTML template exists for a redirect, then it will be returned if the corresponding setting is empty. The search arguments on the URL are available as template variables.
- Added the `[[GETURL:<url>]]` template function which is substituted for the contents of the specified URL, for example: `[[GETURL:https://text.teamdrive.com/embedded-text.txt]]`. Template variable substitution is also performed on the retrieved text.
- Added new template conditional functionality. You can now compare a template variable to a specific value, using `[[IF:<name>=<value>]]`, `[[IFNOT:<name>=<value>]]` and `[[ELSEIF:<name>=<value>]]`, for example:

  ```
  [[IF:PLATFORM=win]]
  Platform: Windows!<br>
  [[ELSEIF:PLATFORM=mac]]
  Platform: MacOS!<br>
  [[ELSEIF:PLATFORM]]
  Unknown Platform: [[PLATFORM]]!<br>
  [[ELSE:PLATFORM]]
  No platform specified!<br>
  [[ENDIF:PLATFORM]]
  ```

  As before, if `=value` is not specified, then `IF` checks that the variable is not empty, and `IFNOT`, is true if the variable is empty.
- Admin Console: fixed a bug that caused confusing messages when devices were deleted (REGSERVER-1582).
- In the Admin Console it is now possible to switch a user to and from external authentication, as long as the super PIN is not enabled. Ensure that the user has a backup of their space keys, or has access to a TeamDrive client installation before making this change (REGSERVER-1556).

  It is also possible to enable and disable the super PIN for a user account, and to enabled and disable the user's Key Repository. Enable and disabling encryption on a user device is also possible. Note that TeamDrive client version 4.6.12 or later is required to support this functionality.

- Providers can now be removed when associated host servers are no longer accessable (REGSERVER-1555). When removing the Provider, the depots are marked to be removed from the host server. A new auto-task: "Delete Depots on Host" will remove the marked depots from the host server in the background.

  If an error occurs when removing a depot, the error will be ignored if the host server of the depot has already been removed, or was never registered.

  In addition it is now possible to remove a host server in the Admin Console, even when the server still has existing depots. When removing a host server you can decide if you want to also delete the depots on the host server. If not, the reference to the depot will simply be removed from the Registration Server database.

- Fixed "Table 'td2reg.TD2AccountMember' doesn't exist" error when upgrading from version 3.5.5 (REGSERVER-1579).
- The "activateuser" call now activates the user and all devices that have not been activated (REGSERVER-1574). See activateuser_ref for details of all changes to the call.
- Admin Console: changing a user's email address, now requires confirmation from the user, who must click on an activation link send by email to the new email address (REGSERVER-1561). In addition, a notification is sent to the old email address that a change of email is in progress. If the email change is not confirmed within 2 hours the change is cancelled.
- The Email Queue is now prioritized. Notification emails send by the TeamDrive client are considered low priority, and will only be sent after all other emails have been sent (REGSERVER-1570). This is to ensure that regular emails are sent despite limits to the email send rate.
- Renamed setting SendGridIPList to EmailHookIPList. Added EmailHookURL.
- Updated default HTML templates to look better on small screens.
- Added `DEFAULT_AUTH_SERVICE_NAME` Provider setting. If the Provider is using an External Authentication Service that has not been upgraded, and therefore does not return it's External Authentication Service name (see default_auth_service_name).
- Certain errors when sending emails not result in the email "bounced" flag being set (REGSERVER-1567). This includes, the following error codes, in combination with the text strings in the error messages:

  ```
  550, "invalid dns"
  550, "mailbox unavailable"
  550, "user unknown"
  ```

  If this the "bounced" flag is set, then emails will no longer be sent to the user.

  In the Admin Console a button is provided next to the "bounced" flag's checkbox to display the Email Log for the user. This includes any email error events that may have occurred during the email send process.

  A further button, "Send Test Email" is provided, which sends an email to the user with a link in which the user can confirm the validity of their email address. For this purpose the email template **confirm-email** and the HTML template **email-confirmed** have been added.

  When the user clicks on the link, the "bounced" flags is removed from the user's account, and all emails that failed to be sent are reset, and the Registration Server will attempt to send these emails again.

- The portal registration page was incorrectly placing the email address in the username field after an error occurred (REGSERVER-1585).

12.2 4.5.4 (2020-10-20)

- The setting `RedirectorProtocol`, now applies to all URL's returned by the Registration Server. This includes the portal pages, and the Provider "REDIRECT" settings, and global "RedirectURL" settings (REGSERVER-1575).

Even if a setting such as `REDIRECT_FAQ` is set to a URL like: `http://my.server.org/faq.html`, if `RedirectorProtocol` is set to “https”, then then a request for `REDIRECT_FAQ` will return `https://my.server.org/faq.html`.

- The “tdnslookup” API call new returns the Registration Server URL whenever it is returned by TDNS (REGSERVER-1565). In addition, the request tags `<email>`, and `<lookupboth>` have been added. See tdnslookup_ref for details.
- Removed the deprecated paths from the URL’s used by the Registration Server and Host Server. This affects the values of the following global settings: `RegServerURL`, `MasterServerURL`, `LoadBalancerURL`, `PingURL` and `RegServerAPIURL`, and possibly also some of the Provider settings which contain URL’s (REGSERVER-1550).

  The URL’s were modified by changing the path components: “pbas/p1_as”, “pbas/td2as” and “pbas/td2api” to “yvva”.

  In addition, the ”.htm” extension for API access is deprecated, and ”.xml” should be used.

  As now specified in API_Basics, the URL to access the the Registration Server’s API is as follows:

  ```
  https://<domain>/yvva/api/api.xml?checksum=<md5>
  ```

- Fixed error in the “createdepot” API which caused it to incorrectly return the error: “Cannot create depot, not permitted by license” (REGSERVER-1549).
- Minor email template improvements (REGSERVER-1544).
- Added redirect URL to the Web Portal (REGSERVER-1546). Using the ”.json” extension on the request will result in a JSON result, which contains the re-direct URL, for example:

  ```
  {
    "distributor":"PAL3",
    "language":"en",
    "language-arg":"en-GB,en-US;q=0.9,en;q=0.8",
    "page":"webportal",
    "resulttype":"ok",
    "url":"http://localhost:33000?dist=PAL3"
  }
  ```

  If an error occurs then the “resulttype” field is set to “exception”:

  ```
  {
    "distributor":"EXT1",
    "errorcode":-30147,
    "errormessage":"No URL provided for requested page",
    "language":"en",
    "language-arg":"en-GB,en-US;q=0.9,en;q=0.8",
    "page":"webportal",
    "resulttype":"exception",
    "secondarycode":0,
    "test":"false"
  }
  ```

  If the request includes “test=true”, then the Registration Server will attempt access the URL, and report an error if it fails:

  ```
  {
    "distributor":"PAL3",
    "errorcode":-12171,
    "errormessage":"Failed to connect to localhost port 33000: Connection refused
  ↪",
    "language":"en",
    "language-arg":"en-GB,en-US;q=0.9,en;q=0.8",
    "page":"webportal",
    "resulttype":"exception",
  ```

```
  "secondarycode":7,
  "test":"true",
  "url":"http://localhost:33000?dist=PAL3"
}
```

- All API functions that send emails now also accept a fields list, which is used to set custom template variables, for example:

  ```
  <fields>
    <os>iOS</os>
    <contact-person>Joe Smith</contact-person>
    <description>This is a test...</description>
  </fields>
  ```

  This input will set the template variables as follows:

  - `[[OS]]` = "iOS"
  - `[[CONTACT-PERSON]]` = "Joe Smith"
  - `[[DESCRIPTION]]` = "This is a test..."

  Template variables set using the `<fields>` tag may may not overwrite default values used by the Registration Server. A warning will be logged if you attempt to do this.

- Added new auto-task: "Synchronise TDNS" (REGSERVER-1554). This task verifies the TDNS entry for all users. If the entry exists, but is owned by another Registration Server or Provider, then it sets a flag on the user, which is indicated by the test "No TDNS Entry" in the Admin Console.

  If TDNS cannot be updated when a user is created, this task performs the update later. These user's will be marked as "TDNS Update Pending" in the Admin Console. Note that only TDNS updates can be delayed, if adding the TDNS entry fails, then user creation will fail.

12.3 4.5.3 (2020-07-22)

- The Host Server of an account can now be specified to be owned by the account (REGSERVER-1532). In this case, managers of the account are automatically granted CREATE-DEPOT, EDIT-DEPOT-COST and DELETE-DEPOT rights to depots using the Host Server.

  Note that if a Host Server is not owned by the account, then it is no longer possible for a manager to set the size of the default depot.

  Specifying a Host Server for an account, without granting ownership means that the Host Server is just used to create the default depots of the users of that account.

- In the Admin Console, the Depot list now includes depots owned and in-use by account members. As a result, an account manager may not have access to all the depots listed because account managers only have access to the following depots:

  - Depots owned by the account
  - Depots that belong to the Host Server that is owned by the account

  Note that you also only have access to the history of a depot, if you have full access to the Host Server of the depot.

- Resetting the number of incorrect login attempts on the Admin Console did not apply to the Admin Console itself (REGSERVER-1533).

- The Admin Console now supports external authentication (REGSERVER-1530).

  In addition, you can login to the Admin Console using your email address as as user or Provider (REGSERVER-1537). If an email is in use by both a Provider and a user, then you will be required to select the required user from a drop-down list.

- It is now possible to create a user that uses external authentication on the Admin Console. In order to do this, the user's email must be associated with a External Authentication Service, or setting `AUTH_LOGIN_URL` and `VERIFY_AUTH_TOKEN_URL` must be set for the Provider.

  Note that `USE_AUTH_SERVICE` must also be set to `True` in all cases.

  User's created on the Admin Console that use external authentication will have no "External Authentication ID". This value will be set the first time the user actually logs in (either using the Admin Console or the TeamDrive client or a Web Portal).

- If a user is using an named External Authentication Service, then this will be indicated in the Admin Console. Alternatively the user may now be explicitly marked as using an External Authentication Service or not. This is the case with all users created on the Admin Console.

  As before, for all other user's the standard authentication is the default, even if `USE_AUTH_SERVICE` is set to `True` and `AUTH_LOGIN_URL` and `VERIFY_AUTH_TOKEN_URL` values are provided. To ensure users of the Provider use external authentication, `PRE_LOGIN_SETTINGS` must include (at least) the `enable-login=false` and `enable-web-login=true`, client settings.

  However, if a user is explicitly marked as either using an external authentication service or not it is not necessary to set the `PRE_LOGIN_SETTINGS` for the user. The Registration Server will automatically set the pre-login settings as required.

  In this case, the settings will override any settings that have been set using `PRE_LOGIN_SETTINGS` at the Provider level. So, for example, it is possible to have one user use standard login while all other users of a Provider as using external authentication.

- On the Admin Console you can change the authentication method of a user from external authentication to standard (Registration Server-based) authentication and back, Provider the user has no devices, and no space keys in the key repository (REGSERVER-1529).

  If a user is changed to standard authentication then the user will also be de-activated, and an email sent to the user which provides a link to a page where the user can set a password for their account.

- Moved `ALLOW_WEB_PORTAL_ACCESS` setting to the `WEBPORTAL` settings group and moved `REG_NAME_COMPLEXITY` to the `LOGIN` settings group.

- Added "inbox-confirm-upload" and "inbox-upload-notification" email templates user by the inbox agent to notify users after files are uploaded to an inbox (REGSERVER-1538).

  The setting `MaxInboxEmailPerDay` has been added to limit the number of emails sent by an inbox user. This setting is used instead of the `MaxInboxEmailPerDay` setting used by regular users (see maxinboxemailperday for details).

12.4 4.5.2 (2020-06-25)

- Accounts now include a Super PIN Repository, which stores the Super PINs of all members of the account. To enable the Super PIN Repository the manager must create a "master password" which is then associated with the repository.

  When enabled, users will be prompted to login in order to upload their Recovery Data to the repository. After this point, if a user looses their password, a manager can send the user a Recovery Code, via email, by entering the master password.

  The user can then login using the Recovery Code as a once-off password. The Recovery Code is only valid for a limited time.

  Managers can also request that users of the account enable the Super PIN functionality. Users will then be prompted to login in order to enable the Super PIN.

  Note that the Super PIN functionality will be enabled automatically when using the Web Portal, or when local encryption is enabled (which requires allow-local-encryption=true).

  These functions require TeamDrive client version 4.6.9 or later.

- Added `EnableSuperPINRepository` Registration Server setting. If `False` (the default) the option to enable the Super PIN Repository, and the function to require account users enable the Super PIN are not available in the Admin Console.
- Set the new setting `ACCOUNT_RESTRICTIONS` to `super-pin-repo-pro-license-limit=5` to restrict the use of the Super PIN Repository feature to accounts with 5 or more professional licenses (REGSERVER-1490).

  This means that accounts with less professional license will not be able to enable the Super PIN Repository. By default, this Super PIN Repository is not restricted.
- Added support for SendGrid notifications (sendgrid.com). In order to receive notifications you must set the Registration Server setting `SendGridIPList` to a list of IP addresses that are the source of the notifications (REGSERVER-1517).

  The Registration Server will forward notifications to other Registration Servers if necessary (based in a TDNS lookup of the email address). This is done by the "Forward SendGrid Events" auto task. The IP address of forwarding Registration Servers must also by included in the `SendGridIPList` list.

  The "email bounced" flag will be set for user's with email address on which an error notification occurs. Emails are no longer sent to these addresses, and are marked in the email send queue as such. The errors on an email address can be cleared by removing the "email bounced" flag for the user in the Admin Console. When this is done, the Registration Server will attempt to send (retry) all outstanding emails to the user.
- The "Send Emails" auto task will now no longer attempt to send an email to a user who has the "email bounced" flag set. Instead the email will be marked with status "Bounced". Emails will also not be sent to email address that have a error registered in the Email Error log (which is written by SendGrid notifications).

  Resetting the email status will remove both the "email bounced" flag as well as the errors in the Email Error log, to ensure that the Registration Server really attempts to send the email.
- An account can now be set for a domain (REGSERVER-1522). If the domain is active then any user created with an email using the domain will automatically be added as a member of the account, and use the default license as specified by the account.

  This also applies to users that are automatically created due to an invitation. Note that such users will not be removed by the "Remove Auto Created Users" auto task (even if not activated), since they are members of an account.

  An error occurs if a new user is created for an account, with an email address that is reserved for another account. However, it is possible to move a user with a reserved email address to another account.
- Users that are created due to an invitation will only be displayed as guests of an account if they belong to the same Provider (REGSERVER-1528).
- On login using a registered External Authentication Service, the Registration Server incorrectly required the `VERIFY_AUTH_TOKEN_URL` setting to be set, instead of using the Verify URL specified for the service (REGSERVER-1531).

12.4.1 Administration Console

- Combined the HTML and Email templates pages into one page called "Manage Templates".
- When sections are opened on the Edit Account page, they remain open after page reload.
- Resetting the status of an email in the email queue will cause all errors recorded for the email to be deleted, and the user's "email bounced" flag will also be set. This is to ensure that the Registration Server really tries to resend the email.

  If you wish to retry sending all emails to a particular email address, then go to the user of the email, and reset the "email bounced" flag.

12.5 4.5.1 (2020-05-12)

The most significant additions to the Registration Server in this version are the “Super PIN” functionality, and support for a new “on-boarding” process (REGSERVER-1323).

The Super PIN functionality is required to support client-side “local encryption”. The Super PIN is activated for a user account when client-side local encryption is enabled by the TeamDrive client.

Local encryption adds an addition layer of security by protecting important data stored on then client. When using a Web Portal, local encryption is automatically enabled.

When the Super PIN is activated, the user may no longer set their password using a temporary password. If the user forgets their password they must either enter their Super PIN, or a Recovery Code, which is obtained using a “Recovery URL” (stored as a QR Code).

The user will be promoted by the TeamDrive client to export and store this information when the Super PIN functionality is enabled.

It is now possible for a Provider to reserve domains and register external authentication services. Reserved domains must be activated by TeamDrive before they are used. When activated, domain reservation, prevents users of other providers from using email addresses with the reserved domains. In addition, external authentication services can be registered and then associated a reserved domain.

This information used by the TeamDrive client to locate the correction Registration Server during login and registration (required client 4.6.9), and the domain-based external authentication selection service.

Domain and service information is stored on TDNS (the TeamDrive Name Service), and can be managed using the Registration Admin Console.

The new on-boarding process involves the automatic creation of user accounts when a user is invited to a space (see the new `INVITATION_CREATES_USER` Provider setting). The user is registered using the email specified in the invitation, and does not have a username (which means that `USER_IDENTIFICATION_METHOD` must be set to `email` or `default`, see user_identification_method). An email (the **reg-activationsetpassword** email template) is sent to the user with a link which allows the user to set a password for their user account. Activation is optional (see `ACTIVATE_ON_INVITATION`).

Note: if the user is not activated within a certain number of days, specified by `AUTO_CREATED_USER_TIMEOUT`, then the user will be automatically deleted. By default this is 60 days (see auto_created_user_timeout for details).

Users added by invitation, are listed as “guests” members of an account, if they are invited by a member of an account (REGSERVER-1504). Guest users can then be easily added to the account as member or manager.

After setting a password, the user may be provided with links to a Web Portal, or with a link to download the TeamDrive client. This can be done by configuring the relavent HTML templates, in particular **set-password-ok**. After login, using email and password the user will have access to the space to which they were invited.

On-boarding in this manner is the default when a user is created in the Admin Console. In other words, after creating a user in the Admin Console the user is sent an email with a link that allows the user to set their password, and after doing this proceed to a Web Portal or to download the TeamDrive client.

Users that are on-boarded automatically using this functionality can be granted a special license as specified by the `NEW_USER_LICENSE_FEATURES` Provider setting.

In addition to these changes, it is now possible for a manager to invite an existing users to an account. Support is provided for this in the Registration Server API and the Admin Console. Invited users can be assigned a license which will be applied when the user accepts the invitation. Licenses assigned during invitation are counted to the usage of those license.

12.5.1 Registration Server Functionality

- Added support for registration of users without a username in the TeamDrice client.

- The `[[SUPERPIN]]` conditional template variable is now used in the **new-passwd** and **web-newpassword** templates to return an appropriate message to users that attempt to change their password using an old TeamDrive client, after the Super PIN has been activated (REGSERVER-1447).

  Conditional blocks in templates may now have the form `[[IF:<cond-var>]]` ... `[[ELSE:<cond-var>]]` ... `[[ENDIF:<cond-var>]]` (the `ELSE` markup tag is optional).

- Added `SUPERPIN_LOGIN_WITHOUT_ACTIVATION` setting which determines whether an activation email is sent the user when using a Super PIN to login to a new installation (REGSERVER-1451).

- Added `TEMP_PASSWORD_TIMEOUT` Provider setting which determines the amount of time a temporary password valid (REGSERVER-1438). Default is 10 minutes.

- Added the `MAXIMUM_DEVICES_PER_USER` Provider setting. The default value is zero, which means no limit. If set to another value the new "Deactivate/Activate Devices" auto task will enabled and disable devices as required to ensure that only the specified number of devices are active. The disabled devices are set to the "too many devices" status (REGSERVER-1399).

  The server always disables the least recently used devices. As a result, a device can be reenabled by simply running the TeamDrive client. However, it takes an average of 3 hours before a device is reenabled by the server.

  The device status is now sent to the TeamDrive client which should disable the GUI and stop synchronisation when the status of the devide is disabled.

  In this state the device will receive invitations, but will not send them to the client. This ensures that if the device is enabled, then the invitations will be sent to the client.

- Added new Provider settings: `INVITATION_CREATES_USER`, `INVITATION_NEW_USER_PROVIDER`, `NEW_USER_LICENSE_FEATURES` and `ACTIVATE_ON_INVITATION` (see invitation_settings).

  These new settings belong to the `INVITATION` settings group, which was previously called the `REFERRAL` group.

- A new email template, **inv-newuser-invited**, has been added (see templates_for_client_actions). This template is used when a user is automatically registered by the new `INVITATION_CREATES_USER` feature (see above).

- A `[[DISCLAIMER]]` email template field has been added to all email templates to which it may apply (REGSERVER-1290). The disclaimer text can be set in the Admin Console under the account of the user. If no disclaimer text is available, then the `[[DISCLAIMER]]` field is removed, including the extra empty line that results from this.

- When the TeamDrive client requests the "default" depot, the Registration Server will now return any depot that the user has in use, if the user's "cloud depot" and default depot's do not exist.

- Added the **NoDepot** license feature which disables the creation of a default depot for new users (see default_free_feature).

- The server now retains the "default" depot status, when the default depot is removed from usage. As long as the user's default depot is either in-use or is owned by the user, it retains the "default depot" status for the user.

  In addition, the default depot status will be restored to a depot, if it is removed from the user (both in-use and ownership), and then added again, as long as the user is not given a different default depot.

  As long as the user has a default depot, no new default depot will be created.

  In previous version of the server, removing the usage of a the default depot from a user would cause a new default depot to be created (assuming `HAS_DEFAULT_DEPOT` is set to `True`), as soon as a TeamDrive client calls the Registration Server.

- The `ALLOWED_DIST_CODES` is now also applied on user registration. However, this is only done when the client sends the distributor code from the DISTRIBUTOR file (REGSERVER-1402). This required client version 4.6.8 or later.

For login, clients before this version were not sending the distributor code from the DISTRIBUTOR file if users entered a different code in the Provider panel. In this case the server was checking the entered distributor code.

In the case of external authentication all client version send the correct distributor code (the distributor code from the DISTRIBUTOR file).

- Added a checkbox to accept the "Terms of Service" on the portal registration page (template: **portal-register**), and the set password activation page (template: **set-password**) (REGSERVER-1450).

  Added the `REDIRECT_TERMS` Provider setting which specifies the "Terms of Service" page. A reference to this page is used in the **portal-register** and **set-password** HTML templates.

- Added depot template: **depot-warning**, **depot-cancelled**, **depot-reduction** and **depot-reduced** which are used by the Host Server to inform the managers and owners when depots usage has exceeded the required limit (see :ref:mail_templates_for_depots).

  The template **depot-traffic** is used to inform managers and owners about critical levels of network traffic usage.

- The `USE_SENDER_EMAIL` setting has been deprecated, and replaced by `FROM_EMAIL_OPTIONS` (see from_email_options). The `FROM_EMAIL_OPTIONS` value is set by default so that the behaviour of the Registration Server in this regard will not change (REGSERVER-1452).
- Added the `EnableDomainSupport` (**TDNS**) setting. When set to `True` this setting enables the support for the reservation of domains and registration of service by a Provider.
- Added the `PREVIOUSLY_UNNAMED_SERVICES` (**AUTHSERVICE**) Provider setting. This setting must be used when upgrading an existing External Authentication Service to a "named" service. "Named" services are services registered globally on TDNS (This is done using the Admin Console).
- Changes to Provider settings:
  - Renamed settings group: `LOGIN` to `ADMINCONSOLE`
  - Renamed settings group: `ACTIVATION` to `LOGIN`
  - Rename setting `ALLOW_LOGIN_WITHOUT_EMAI` to `LOGIN_WITHOUT_ACTIVATION`
  - The following setting have been moved from `CLIENT` to new `LOGIN` group: `ALLOWED_DIST_CODES`, `PRE_LOGIN_SETTINGS`, `LOGIN_WITHOUT_ACTIVATION`, `ALLOW_NEW_REGISTRATION`, `ALLOW_MAGIC_USERNAMES`, `ALLOW_WEB_PORTAL_ACCESS`, `ALLOWED_LOGIN_ATTEMPTS`, `FAILED_LOGIN_TIMER`, `SUPERPIN_LOGIN_WITHOUT_ACTIVATION`, `TEMP_PASSWORD_TIMEOUT` and `USER_IDENTIFICATION_METHOD`.
- Documentation: updated screenshots in section **Using the Administration Console**
- The email template: **reg-registrationnotify**, which was previously unused, is now sent after a user sets a password using the link sent in the **activationsetpassword** email. The `[[PASSWORD-SET]]` template variable is also set to `true` in this case.
- Added global setting: `EmailSendRate`, which determines the maximum rate at which emails will be sent. The default is "0", which means unlimited. Any other value is the number of emails that may be sent per minute.
- Added the `SPACE_SIZE_LIMIT` Provider setting which restricts the size of spaces for users with a restricted or non-professional license (REGSERVER-1502).
- Fixed TD2OwnerMetaHistory does not exist error when updating from Registration Server 4.0.1 (REGSERVER-1520).

12.5.2 Registration Server API

- The "registeruser" API call now supports the option `<nodepot>` which, when set to `true`, prevents the assignment, or creation of a default depot for the user. In addition, a depot may be assigned to a user on registration using the appropriate tags (REGSERVER-1326).

- The new "inviteusertoaccount" API call can be used to invite a user to an account via email. The call will send the "account-manager-invitation" or "account-member-invitation" email template depending on the type of invitation. The user is provided with links in the email to either accept or reject the invitation (REGSERVER-1289).

  The function to invite users to an account is also available in the Admin Console.

- The "tdnslookup" API call will now work, even when the Registration Server is not connected to TDNS. In this case the call will return information from the local database (REGSERVER-1410).

- Added a `<messagetext>` tag to the "registeruser" API call. This tag specifies a message that can be placed in the email sent by the call use the `[[MESSAGE-TEXT]]` template variable.

  Also added a `<sendcc>` tag (default is `false`). When set to `true` the Registration Server will "CC" the email sent to the user, to the caller (set by the `<changeuser>` tag).

- All email addresses must now have the form: x@x.x, where x is one or more characters. White space, ',' and ';' are not allowed (REGSERVER-1471).

- Added "getsettings" API call. A list of Registration Server and Provider settings can be specified, using the `<settings>` tag. This tag is also supported by the "getuserdata" and "getaccountdata" API calls (REGSERVER-1511).

12.5.3 Administration Console

- The Admin Console will indicate if the Super PIN functionality has been enabled, and also allows managers to disable the Super PIN functionality, which will delete the user's Super PIN.

  Only delete the user's Super PIN if the user has lost both their Super PIN and their password. After removal, the user may then set their password using the temporary password functionality, however previously local encrypted client installations will not be accessable, including Web Portal containers.

  In addition, the user will loose access to space keys stored in the Registration Server's key repository.

- It is now possible to specify a banner and a footer for the Web Portal user interface, for all users of an account, see Customize Web Portal under Extended Settings (REGSERVER-1433).

- Host Servers can now be assigned to accounts (REGSERVER-1299). In this case, the account Host Server overrides the Host Server specified by the `HOST_SERVER_NAME` Provider setting. In addition,account managers are able to set the following parameters at the account level:

  > *Default depot*: Determine whether members of the account have a default depot. This setting, can override the Provider level settings `PROVIDER_DEPOT` and `HAS_DEFAULT_DEPOT`.
  >
  > *Storage size*: This is the storage size of default depots created. This setting override the `HOST_DEPOT_SIZE` Provider setting.
  >
  > *Traffic limit*: This sets the traffic limit of default depots created. This setting override the `HOST_TRAFFIC_SIZE` Provider setting.

  See hostserver_settings for more details on these settings.

- When creating a user, a checkbox has been added which allows you to prevent the creation or assignment of a default depot.

  Note that a default depot will nevertheless be created with the user's first client registration, unless:

  - the user belongs to an account with a default account depot,
  - the user's account has a host server and the *Default depot* account level setting to prevents the creation of a depot,
  - the user's license has the **NoDepot** feature.

- The "Purchase License/Depot" buttons now open a new browser page or tab (REGSERVER-1281).

- UI improvement: the background of the paging control is now transparent.
- The user's account depot is now included in the user's list of depots (REGSERVER-1419).
- Added domain and External Authentication Service management. This is only enabled when the setting `EnableDomainSupport` to `True` (by default `False`). This functionality requires TDNS 1.9.11.
- Depot lists now have separate columns for Storage/Traffic limit/used and can be individually sorted (REGSERVER-1472).
- Added a new `InboxUploadForm` account-level setting, which can be used to configure a form that users must fill out before uploading files to an inbox

12.5.4 External Authentication

- The domain-based selection of the External Authentication Service (`domain` directory) now uses the reserved domain information, and the associated authentication services to direct user's to the correct external authentication service.

  The other external authentication services have been updated to check the configuration using the information stored centrally (TDNS 1.9.11).

  Check the example configuration files for information on the new settings, and changes you need to make to upgrade services.

CHAPTER

THIRTEEN

RELEASE NOTES - VERSION 4.1

13.1 4.1.4 (2020-02-19)

- Changed collation of all emails columns to case-insensitive (REGSERVER-1480).

  All input email are converted to lower-case: in import, and email addresses from external authentication services (REGSERVER-1479).

- Fixed format of output on “Download Client Log Files” page. Long “words” are are now wrapped as required (REGSERVER-1481).

13.2 4.1.3 (2020-01-16)

- Added the `RedirectorProtocol` server setting which can be used to specify the protocol of the “redirect URL” (REGSERVER-1473).
- Fixed a problem that prevented update notifications to the TeamDrive clients from working (REGSERVER-1474).

  Added a new Provider setting: `UPDATE_TEST_VERSION` which can be used to set the version to be used testing an update notification (see update_test_version).

- Admin Console: fixed problem with Provider Codes that consist only of digits (REGSERVER-1028). This caused various problems, for example, it was not possible to create an inbox.
- Fixed a problem that caused the “Expire Licenses” auto-task to fail when a license belonging to an inbox user expired. The error generated was “The inbox user must have a license with the inbox feature” (REGSERVER-1466)
- Fixed the “Lock wait timeout exceeded” errors, that occurred due to an UPDATE to the TD2Message that was performing a table scan (REGSERVER-1465).
- Change required for compatible with yvva 1.5.2.

13.3 4.1.2 (2019-09-16)

- Added documentation for web portal settings. The setting `API_WEB_PORTAL_IP` has been moved to the WEBPORTAL settings section.
- Admin Console: the Manage Licenses page now includes the option to search for “Inbox” licenses (REGSERVER-1436).
- Admin Console: the License Report page was not working due to an error when retrieving the report list from the database (REGSERVER-1444).
- When moving spaces to another depot, it was possible to move a space to a depot to which the account manager did not have access (REGSERVER-1442).

- Corrected email template usage when forcing re-login or reseting a user's password. The email templates sent for these actions were reversed.
- Admin Console: corrected "Force Re-Login/Invalidate Password" functionality in the case where `USE_AUTH_SERVICE` is set to `True`, but `AUTH_LOGIN_URL` remains blank. In the case, external authentication is not being used (since `AUTH_LOGIN_URL` is required for external authentication, instead the Registration Server Portal login pages have been activated.

  As a result, the "Force Re-Login" button should read "Invalidate Password" in this case. This is due to the fact that invalidating the user's password has a different effect, depending on whether external authentication is being used or not.

  This will be changed in Registration Server 4.5, where only the "Force Re-Login" functionality will be provided, in both cases, i.e. whether external authentication is being used or not.

13.4 4.1.1 (2019-06-19)

- Admin Console: fixed crash when logging in with email address, instead of username.
- [account] in redirector URL will now be replaced with blank, if the user has no account.
- CSV import results displayed on the "CSV User Imports" page in the Admin Console, can now be viewed in the browser rather than downloaded directly. A success and/or error file is only available for viewing if at least one success or failure occurred during the import (REGSERVER-1398).
- In the Admin Console, the selection method used in dialogs has changed. If multi-select is allowed, then the checkbox are used to indicated which items have been selected. In the single selected case, radio buttons indicate which item has been selected.

  Currently adding members to an account and users to a license allow multi-select. A "Select All" button is also available in these cases. An extra dialog, confirming your selection is presented when adding more than 15 users (REGSERVER-1397/REGSERVER-1418).

  In addition, the paging section above search results has been improved to provide more options. You can now jump to the beginning or end of the result, and also move ahead or back a number of pages by clicking "..." (which is only available when sufficient pages are available).
- Since version 4.0 the Registration Server is compatible with PHP 7.2 / 7.3. However, the Admin Console may have problems after upgrading PHP due to the fact that the "mysql" extension has been removed from PHP 7 and later.
- Added Web Access to the account-level client settings. The default values of the account-level client settings are now determined by the Provider setting `CLIENT_SETTINGS` value (REGSERVER-1401).
- In the Admin Console, on the Depots page, you can now search for the depot owner's email in addition to the owner's username. The owners email address is also display in the list (REGSERVER-1411).
- Added "web-user-deleted" email templated which is sent to the user after the user's account has been deleted (REGSERVER-1405).
- On login to the Admin Console the username is now case-insensitive (REGSERVER-1406).
- Template names are now displayed in the Admin Consoles email queue (REGSERVER-1409).
- An "inbox" type license can now be created in the Admin Console (REGSERVER-1414).

13.4.1 Registration Server API

- Emails sent by the API may now include the following email template variables: `[ORIGIN-$USERNAME]`, `[ORIGIN-USERNAME]`, `[ORIGIN-EMAIL]` and `[ORIGIN-USERNAME-AND-EMAIL]`. These variable will be empty unless the `<changeuser>` tag has been set in the API call. The "web-activationsetpassword" template has been changed to include a reference to the originator of the email, if the `<changeuser>` tag is set (REGSERVER-1413).

- Added an option to change a user's account in the Admin Console (REGSERVER-1407). This function is supported by the addition of the `<removemembership>` tag to the "addusertoaccount" API call.
- Added documentation for the "updateuser" API call (REGSERVER-1408).

13.5 4.1.0 (2019-04-18)

- Fixed a error that prevented users from being removed, after the Provider was deleted. The problem occurred after the Provider was removed from TDNS (which is required in order to delete a Provider).
- Added the Provider setting required to connect the Registration Server to a web portal API. This API can now be used to create an inbox service for an account. The user which is hosting the inbox needs a license with the **inbox** feature.
- Removed the banner management page in the Admin Console. The Banner administration of banners. This includes the **Banner** feature bit used by licenses. This feature is still displayed for licenses with this feature bit, but the feature can no longer be set.
- The **Personal** license feature is no longer supported by version 4.1 of the Registration Server. This feature was only used by TeamDrive 3 clients. Users must now use the **Professional** license feature instead of the **Personal** license feature.
- Changes to Provider settings are now recording in a change history. The change history of Provider settings can be viewed in the Admin Console.

CHAPTER

FOURTEEN

RELEASE NOTES - VERSION 4.0

14.1 4.0.1 (2019-03-29)

- [account] can now be used in the help redirect URL
- Several bug fixes and improvements to version 4.0.0

14.2 4.0.0 (2018-09-19)

14.2.1 Registration Server Functionality

- Removed the Provider setting: `HOST_SERVER_URL`. This is no longer required, the Host Server to be used is specified by `HOST_SERVER_NAME`.
- Added support for accounts (REGSERVER-1229). Accounts belong to a Provider and include a number of users, groups, depots and licenses. An account is administered by a number of managers. A user can only belong to one account, but may be manager of a number of accounts. Accounts are explained in the the new chapter account concept and in a Admin Console chapter admin_console_accounts.
- Added support for groups (REGSERVER-1196). Users can be invited to join a group, which is administrated by a Group Manager. The user receives an email, which contains a link for joining the group and another link for rejecting the invitation. Users that have rejected invitation 3 or more times can no longer be invited to a group.

  Users can only belong to one group, so when the join a group they are automatically removed from any other group.

  The Manager of a group can assign a license and a Host Server Depot to the group. The group license and the group Depot are used by all members of the group, and have priority over the user's default license and Depot.

  Please notice that group functionality is not available in the 4.0 release of the Admin Console. This will be added in version 4.1.
- The setting `UserNameCaseInsensitive` has been deprecated. All Registration Servers now use case-insensitive usernames. The TDNS entries will be automatically updated of your server had `UserNameCaseInsensitive` set to `False`.
- The Registration Server now uses a new mechanism to synchronise the Depot usage with the Host Server and the TeamDrive Client. The mechanism ensures that changes to Depot usage on the Registration Server is always reflected in the Depot list in the TeamDrive Client, and in the Depot access list on the Host Server.

  Previously, it was possible that there were differences in the Depot configuration for a user between the TeamDrive Client, Registration Server and Host Server. This was due to a number of factors:

  - The Host Server access list for a Depot was previously not updated by the Registration Server API.

  - By setting `<sendtoclient>false</sendtoclient>` in an API call the user could previously specify that the changes to the Depot configuration of a user are not sent to the TeamDrive Client. This tag is now deprecated (see below).
  - If a TeamDrive Client device was not in use for a long time it was possible that changes to the Depot configuration were lost.

- The following characters are never allowed in usernames: ‘$’, ‘;’, ‘,’, ‘@’ “”’ and the single quote (“’”).
- When setting up a Registration Server, the server name is not allowed to contain a ”.”, or any spaces. The server domain must be valid, and contain at least one ”.”.
- Added the `DEFAULT_ACCOUNT_FEATURE` Provider setting which is identical to the `LICENSE_FREE_FEATURE` but applies to users that belong to an account (REGSERVER-1253). If `DEFAULT_ACCOUNT_FEATURE` is empty then the Admin Console will not allow managers to create a new license when adding a user.
- Added the `ACTIVE_SPACES_LIMIT` Provider setting which determines the maximum active spaces for users with a restricted license (REGSERVER-1257).
- Improved security by defining a maximum login attempt and interval (see loginmaxattempts and allowed_login_attempts)
- Added the `PROVIDER_LOGIN_ID` setting which is a list of IP addresses of users that may login with Provider level or higher privileges (REGSERVER-1333). On upgrade this setting is set to the value of the `LOGIN_IP` value, if this value is not empty. Providers that wish to allow normal users or account managers to access the Admin Console from any IP address must set `LOGIN_IP` to empty.
- License that expire are now also valid on the “Valid Until” date (REGSERVER-1389).
- The Registration Server was sending an incorrect result to the client when a disabled user requested a temporary password (REGSERVER-1237).
- Removed deprecated auto task: “Move Store Forward Messages”.
- Fixed possible deadlock involving the Devices table and the “Delete Client IPs” auto task (REGSERVER-1464).

14.2.2 Registration Server API

- The output parameter `<number>` in the searchuser_ref API call, and the getlicensedata_ref API call has been deprecated and will be removed in a future version. Use the license key number now returned in the `<licensekey>` tag.
- The Host Server API URLs returned by the API will now begin with “https://”, if the Provider setting `API_USE_SSL_FOR_HOST` is set to `true`.
- Added “createdepot” API call.
- Added API calls to support account functionality: “createaccount”, “deleteaccount”, “addusertoaccount”, “removeuserfromaccount”, “assignaccounttolicense”, “removeaccountfromlicense”, “setdepotaccount”, “removedepotaccount”, “setgroupaccount”, “removegroupaccount”, and “getaccountdata”.
- Added API calls to support group functionality: “creategroup”, “deletegroup”, “inviteusertogroup”, “removeuserfromgroup”, “setgrouplicense”, “removegrouplicense”, “setgroupdepot”, “removegroupdepot”, “userjoinedgroup”, “setgroupclientsettings”, and “getgroupdata”.
- A number of API calls now also return group related information: “loginuser”, “searchuser”, “getuserdata”, “getlicensedata”, “getdefaultdepotdata”.

  The “getuserdata” call now return account and group information by default. Set the input tags: `<includeaccounts>` and `<includegroups>` to `false` in order to exclude this information. This call also returns license currently assigned to the user in the `<license>` block in the `<userdata>` block. If `<includegroups>` is `true` then this is the group license if the user belongs to a group with a license.

The calls: "loginuser" and "getlicensedata" return the user's group information by default. Set the input tag: `<includegroup>` to `false` in order to exclude the group information.

The calls "searchuser" and "getdefaultdepotdata" do not include group related data by default. In this case you must explicitly set `<includegroup>` to `true` to receive this information.

- The `<depot>` block returned by the calls "getuserdata" and "getdefaultdepotdata" calls includes a number of new tags:
  - `<globalid>` is the global identifier of the depot.
  - `<iscloud>` is set to `true` if the depot is the user's default cloud storage.
  - `<isaccount>` is set to `true` if the depot is set on the account level.
  - `<isgroup>` is set to `true` if the depot belongs to the user's group.
- When returning information about licenses (`<license>` tag) the `<isgroup>` tag is now included. This tag is set to `true` if the license belongs to the user's group.
- In the "registeruser" API call new supports a number of new tags: `<accountkey>`, `<accountreference>`, `<groupreference>`, `<featurevalue>`, `<clientsettings>`, `<activate>` and `<sendmail>` (see registeruser_ref for details).
- The `<sendtoclient>` tag is the API calls: "setdepotforuser" and "removedepotfromuser" is deprecated. If present, the tag is now ignored by the Registration Server. Changes to the usage of a Depot are now always sent to the TeamDrive Client.
- Added API calls: "syncdepotdata" and "getdepotdata".
- API calls that send emails now support the `<sendmail>` tag. This allows the caller to override the `API/API_SEND_EMAIL` setting, to determine whether an email is sent or not.
- The `<changeuser>` tag is used to specified the username of the user that is making changes to depots.
- Added `<setpassword>` tag to the "registeruser" API call. When set to `true` (default is `false`), this will send an email using the **web-activationsetpassword** template to the user. This email contains a link to the **set-password** HTML template, which allows the user to set his password, and activate his user account (REGSERVER-1320).

14.2.3 Administration Console

- Rearranged the menu of the Admin Console and extended the user right levels for viewing, creating, editing and deleting objects (see admin_console_user_rights).
- Restricted the view presented by the Admin Console to only those pages that a user has the right to view. Any TeamDrive user with login privileges may login to the Admin Console, and view and manage their resources.
- Added a global Provider drop-down menu, so that users with access to more than one Provider can select a Default Provider for all operations.
- Added account management.
- Added new categories for Registration Server settings: API, Proxy, RedirectURL and TDNS (REGSERVER-1227).
- Added an automatic redirect to the login page when the login session expires.
- If a Depot is deleted and then undeleted on the Host Server, an "Undelete Depot" button is available in the Admin Console to make the depot available again.
- The "Force Re-Login" function is not always available on the Edit User page. Previously this function was only available if external authentication was in use (REGSERVER-1469).

  The function to "Invalidate Password" is available, in addition if the Super PIN functionality is not enabled, and external authentication is not in use.

"Force Re-Login" is also available in the Manage Users page, where it effects all user in the selection.

Forcing a re-login will require the user to login again on all installed devices.

14.2.4 External Authentication

- All external authentication services (except `vasco`) now use the same functions to evaluate input and generate the authentication token.

  The services can now be deployed by following the instructions in the `*_config.php.example` page to create a configuration file, and then customising the HTML in the `*_login.php` page.

  However, be careful to preserve the PHP dynamic tags in these files, which all have the form: `<?= .... ?>` and `<?php ... ?>`.

  Future upgrades will be done (in most cases) by simply replacing all files accept `*_login.php` and `*_lconfig.php`.

  Note that the `auth` directory is now used by all authentication services, and `auth\vendor` is used by the Google and Azure services.

- Added support for Google and Azure OAuth2 external authentication. To use these services:

  - follow the instructions in the `*_config.php.example` page to create a configuration file, and
  - customise the `*_login.php` page to suite your purpose.

- Added domain-based selection of the External Authentication Servicez (`domain` directory). The initial page of this service requests the user's email address. Based on the domain of the email address the user is forwarded to the appropriate authentication service.

  The mapping from domains to authentication services is configured in the `dom_config.ini` files (see `dom_config.ini.example` for notes on how to created this file.

  Using this service, the users of a single Provider can use various authentication services. If this is the case, then each authentication service must be given a unique name, which is used as a prefix to the external authentication (External Auth. ID) of the user to avoid duplicate IDs.

- The LDAP external authentication has been updated to evaluate options from various clients, including: the TeamDrive client, the Web Portal, and the TeamDrive agent.

  As a result, the `ldap_login.php` page can be used in all cases, and the `ldap_web_login.php` and `ldap_agent_login.php` pages, are no longer needed, and have been removed.

  Follow the instructions in the `ldap_config.php.example` page and read the information about the LDAP encryption parameters (ext_auth_config_setup). See upgrade-ext-auth) when upgrading from an older version of the LDAP authentication service.

  In addition, the `$provider_code` setting has been deprecated. When upgrading, copy the value of this variable to the position of the first URL in `$allowed_origins` (see ldap_parameters for details).

CHAPTER

FIFTEEN

RELEASE NOTES - VERSION 3.X

15.1 Change Log - Version 3.6

15.1.1 3.6.8 (2018-02-07)

- Added new Provider EMAIL settings which override the global Registration Server settings (REGSERVER-1226). This makes it possible to specify the SMTP Server to be used to send emails at the Provider level. Support for sending mails using SSL/TLS by prepending the protocol "smtps://" (only supported on CentOS 7 systems due to dependencies of required curl functionality) and authentification with an username and password was added:
  - `SMTP_SERVER`: The SMTP Mail Server address (host name), if empty the `SMTPServer` global setting value will be used.
  - `SMTP_SERVER_TIMEOUT`: the Timeout in seconds when waiting for the SMTP Mail Server, if empty the `SMTPServerTimeOut` global setting value will be used.
  - `SENDER_HOST`: Host name of the email originator. If empty the `MailSenderHost` global setting value will be used.
  - `SMTP_SERVER_USER`: Username for smtp authentification.
  - `SMTP_SERVER_PASSWORD`: Password for smtp authentification.
- Version 3.6.8 requires YVVA runtime version 1.4.5.

15.1.2 3.6.7 (2017-11-06)

- Fixed a crash when sending email due to incorrect SQL statement (REGSERVER-1223).
- Fixed sending of "Future Device" messages which are used to sent invitations to users that do not yet have a device.
- Documentations has been changed to conform to the new TeamDrive CI.
- Some devices were not receiving invitations because the "Demo" flag was set. This flag is now ignored when invitations are sent.
- Replaced TeamDrive logo and colors
- Improved logging of errors when connected to TDNS, Host Servers and other Registration Servers. If an unexpected reply is received, the server will dump the first 420 characters of the response to the log, in order to help debugging proxy related connection errors.

  During setup of a Registration Server details of incorrect results are provided when you press the "Error Details" button. If the server receives an unexpected result when trying to contact other servers then the first 420 characters are display in the dialog window.
- External Auth Service: corrected generation of User Secret. Added the "alt User Secret" to enable transition to a new method for generating user secrets.

- Added the `SETUP-2FA` conditional variable for the Portal Pages (html and email templates/html templates/portal pages) which is set to "true" if the user selects to setup 2-Factor Authentication during login.

  The default **portal-login** page has been altered to use the variable to indicated if the user has selected to setup 2-Factor Authentication or not.

- Fixed a bug in the Web-based setup of the Registration Server that caused a "Unknown attribute: 'REG_SERVER_BUILD"' exception (REGSERVER-1214).
- Registration Setup as Standalone or Master server now requires as "Setup Code". This is required in order to prevent the accidental installation of a Registration Server that can only be accessed using a customised TeamDrive Client. A Setup Code can be obtained from support@teamdrive.com, but requires an agreement for the deployment of a "white-label" TeamDrive Client.
- Fixed a bug in the Registration Server Setup that prevented the installation of a server when using a proxy to access the Master Registration Server.
- Version 3.6.7 requires YVVA runtime version 1.4.4.

15.1.3 3.6.6 (2017-08-04)

- Fixed an exception that occurred when attempting to wipe a device (REGSERVER-1210).
- Fixed a error that occurred when removing a device installation on the client of a user had already been removed (REGSERVER-1211).

15.1.4 3.6.5 (2017-07-13)

- The Reg Server now handles "store forward" invitations sent by the TeamDrive client, when a user has no active devices (because all devices have been inactive for longer than `DeviceInactiveTimeout`). Previously this only worked if the user had no devices (which can happen if the user was created via the API).

  The first device that becomes active after this point, whether it is a new device or an old device that was re-activated will receive the invitation (REGSERVER-1200).

- API call "removelicense" was not working due to a problem with NULL values (REGSERVER-1197).
- Fixed activation of users and devices via the Admin Console (REGSERVER-1199)
- Uploaded Client log files are now stored in a table created to store all large binary values (TD2LargeBinaries). This prevents a slowdown of access to the TD2BlobData table (REGSERVER-1202).

  On upgrade the log files will be moved from one table to the other. This can take some time.

- Added a new covering index to the TD2BlobData table that includes all columns used to search the table. This will allow the server to avoid reading the entire row during a search.

  The column TD2BlobData.Extension has been shortened to 40 bytes (ascii) and the columns TD2BlobData.SourceChecksum has been removed because it is no longer used (REGSERVER-1201).

- Optimised the queries used in the CSV page in the Admin Console, and fixed a bug that left the 'error' and 'success' file in the database when a CSV file was deleted
- Fixed a bug in the "searchuser" API call. When `<showdevice>` was `false`, the `<total>` was incorrectly set to 0 (REGSERVER-1204).
- Fixed a bug when deleting an user and his depots: If user is not the owner of a depot he must be removed from the depot as an user instead of deleting the depot (REGSERVER-1205).

15.1.5 3.6.4 (2017-05-04)

- Fixed crash in regserverdistribution (REGSERVER-1186).
- Fixed an error that resulted in the `<licensekey>` tag missing from a number of API calls that returned license data (REGSERVER-1187).
- Fixed setting a client update notification using the admin console (REGSERVER-1189).
- The `<intresult>` tag was missing from the result of the "createlicensewithoutuser" API call.
- Several small fixes for the admin console: improved user search speed and added case insensitive search for usernames, fixed regular expression for magic usernames with an ID > 9999, improved client logs download page
- Added hint how to start the apache service after mysql (see *Enabling Service Autostart* (page 26))
- Fixed sending API calls for different Provider using the same IP (REGSERVER-1194).
- Fixed license change history in the Admin Console in cases where the 'license created' entry was missing from TD2TicketChanges (REGSERVER-1188)
- Require entry of a confirmation text when deleting licenses (previously this was only required if the license was created in an external system) (REGSERVER-1193)
- The default Provider can now view uploaded log files for all providers at once (REGSERVER-1190)
- Installation: set `max_allowed_packet=32M` in order to support the upload of large client log files (REGSERVER-1192)
- Fixed a number of problems with the API functions "searchuser" (REGSERVER-1195): It is now possible to retrieve all users by not specifying any search condition. Previously this caused error -30116.

  The result tags `<current>`, `<total>` and `<maximum>` now refer to the number of users, regardless of whether devices are included in the result or not. Previously these tags referred to the number of devices, when `<showdevice>` was set to `true`.

  Previously it was possible that devices for the last user returned were missing, if the maximum rows (`<total>` value) was exceeded when including devices in the result.

  When you specify a `<startid>` value, the `<total>` value returned now consistently refers to the total number of users with an ID greater than the specified value.

  This means that, in general, if the `<total>` value is greater than the `<current>` value, then the caller knows that more user records are available with the input parameters.

  Previously to version 3.6.4 the result `<total>` was not consistant if `<showdevice>` was set to `true` and should not be used.
- Increased TD2BlobData.Data column size to allow 50 MB uploaded log files (REGSERVER-1191).
- Increased TD2Depots.ReposDoc column size to 4000 characters required to store larger repository files (REGSERVER-1185).

15.1.6 3.6.3 (2017-03-22)

- Added Provider setting `EMAIL/IGNORE_TEMPLATES_LIST`, which contains a list of email templates. Emails will not be sent with the templates specified in this list (REGSERVER-1184).
- Added the `UsePrecedenceBulk` setting which determines whether the "Precedence: bulk" header should be added to outgoing emails (REGSERVER-1182).
- The API documentation now includes a section on the changes to the API based on the Registration Server version. All changes since version 3.5.0 are noted in the documentation of the API calls (REGSERVER-1173).
- Fixed a bug removing users from a depot who had been added to the depot when it was created (REGSERVER-1159)

- Several minor changes and fixes in the Admin Console (fixed spelling License -> Licence, moved "change user license" on the edit user page from device block to user block, fixed 2 SQL statements, added username to client logs download page)
- Added new clients settings `allow-webaccess-by-default` and `enable-space-webaccess` in the documentation

Registration Server API

- The "activatelicense" and "deactivatelicense" API calls no longer return error -30210 (REGSERVER-1177). If the license is already in the state set, then the call is ignored.
- Specifying a user in the "removeuserfromlicense" API call is now optional. If specified, then the user must be the owner of the license or a "Unknown license" error will be returned (REGSERVER-1178).
- Remove the API version number (1.0.006, 1.0.007, etc.) The Registration Server version number is now used to determine when API changes have been made. All API calls now return the `<regversion>` tag which contains the version number of the server (REGSERVER-1173).
- "getdefaultlicense" API call: removed the exception that returned the features of the license in use if it was higher than the features of the default license.
- Added a `<licensereference>` tag to the input parameters of the "loginuser" call. This tag is used if a default license is created for the user. This is only done if the user has no default license, and the Provider setting `DEFAULT_LICENSEKEY` is empty.
- The new reference should now be specified using the `<newlicensereference>` tag in the "setlicensereference" API call.
- Added an optional `<password>` tag to the "removeuser" API call input data.
- The `<featurevalue>` tag value may now also be specified as an integer in the "createlicense", "createlicensewithoutuser", "upgradelicense" and "downgradelicense" API calls.
- Added the `<licensereference>` tag to the `<license>` block in reply of the "getusedlicense" API call.
- Added the `<licensereference>` tag to the `<user>` and the `<device>` block in reply of the "searchuser" API call.

15.1.7 3.6.2 (2017-02-01)

- The Registration Server Portal Pages (see html and email templates/html templates/portal pages) will no longer allow login of users that have previously logged in using an external authentication service (REGSERVER-1180).
- If a user is using external authentication then the server will no longer allow the user to change his password. The server now returns an error -24907: Permission denied, when the TeamDrive client attempts to perform on of these functions (REGSERVER-1179).
- External authentication now first checks whether the authentication token is an internal token used by the portal pages. If not, it checks the URL specified by the `AUTH_LOGIN_URL` setting (REGSERVER-1181).
- Added Provider setting `USER_IDENTIFICATION_METHOD` (REGSERVER-1171). This setting determines how users will be identified (see user_identification_method). `USER_IDENTIFICATION_METHOD` replaces the Provider setting `USE_EMAIL_AS_REFERENCE`, which has been removed.
- Fixed a bug that caused the switch-distributor function to always create a new depot and license even when the checkboxes where not selected (REGSERVER-1170)
- Added new server setting PrivacyURL and Provider redirect page REDIRECT_PRIVACY
- Added fields to select an existing license when creating a new user in the Admin Console (REGSERVER-1166)

- Can now filter the list of devices by the username or email address of the user who owns the device (REGSERVER-1160)
- It is now possible to edit licenses with an "extreference" set (REGSERVER-1168)

Registration Server API

- The `<licensekey>` tag must be used in place of the `<licensenumber>` tag in the API. `<licensenumber>` has been deprecated and will no longer be accepted in Registration Server 4.0.
- Added a `<licensekey>` tag and a `<licensereference>` tag to the input parameters of the "registeruser" API call. One of these tags can be used to specify a license to assign to the newly created user.
- Removed the Provider setting `API_CREATE_DEFAULT_LICENSE` (REGSERVER-1163). A default license is now always created when a user is created by the API, or during TeamDrive Client registration.

  Since the Registration Server version 3.6 now allows a license to be assigned to a user, even when the user has no devices, the default license is also assigned to the user on creation via the API. If the license already has the maximum number of users, the new user will not be created.

15.1.8 3.6.1 (2016-12-02)

- Fixed a crash that occurred when search user was called from a TeamDrive Client that is registered at a different Registration Server (REGSERVER-1161)

15.1.9 3.6.0 (2016-11-25)

TeamDrive Registration Server version 3.6 is the next major public release following after version 3.5.

Version 3.6 of the Registration Server contains the following features and notable differences compared to version 3.5.

Installation

- The Reg Server 3.6 supports CentOS 7. RPM's are available for this version of the OS.

Registration Server Functionality

- Added the "Web Portal Access" capability bit. This bit represents user-level permission to access Web Portals. The capability bit is only used if the `ALLOW_WEB_PORTAL_ACCESS` Provider setting is set to `peruser` (see below).
- Added `ALLOW_WEB_PORTAL_ACCESS` Provider setting. This setting determined whether users are permitted to access a Web Portal or not. Possible settings are:
  - `permit`: All users are permitted to login to Web Portals (this is the default).
  - `deny`: Web Portal access is denied to all users.
  - `peruser`: Access is determined by the "Web Portal Access" capability bit.
- TeamDrive Authentication Services now includes an example of how to connect to Vasco IDENTIKEY Authentication Server. When used in conjunction with the Web Portal, Web Portal version 1.0.6 is required.
- Emails sent by the server now have a maximum size of 16 MB. Previously the limit was 64 K (REGSERVER-1131).
- Implemented support for Two-Factor Authentication using the Google Authenticator App.

- Added the AUTH_SETUP_2FA_URL Provider setting. This value must be set to the URL of the page used to setup two-factor authentication.

  See registration server how tos/two factor authentication for details.

- Added ALLOW_MAGIC_USERNAMES Provider setting. When set to True, users of the Provider may register with usernames that match the standard “magic username” pattern.
- Added ISOLATED_EMAIL_SCOPE Provider setting. When set to True, the users of the Provider may use email addresses that are in use by other users, as long as the email addresses are unique for the Provider (REGSERVER-1125).
- Added the HIDE_FROM_SEARCH Provider setting. When set to True, this setting will prevent users from being found by a Client when doing the standard username and email address searches, during login and when inviting users to a Space (REGSERVER-1124).
- Added the PROVIDER_DEPOT Provider setting. This setting may be used to specify that a certain Depot should be used as default Depot for all users of a Provider (REGSERVER-1117).
- Added the SUPPORT_EMAIL Provider setting. This setting specifies the email address that will be notified if support content is uploaded to the Registration Server.
- Users will now receive “store forward” invitations no matter which Registration Server the invitation is located on. Previously a user had to register on the same Registration Server as the store forward message.

  A store forward invitation is created when a user invites another user via email, but the user is not yet registered.

- HTTPS is now used for all communications with a Host Server if the Provider setting API_USE_SSL_FOR_HOST is set to True.
- Added the Registration Server setting: EmailGloballyUnique. When set to True the Registration Server will check to ensure that an email address is not in use by any other Registration Server in the TeamDrive Network (REGSERVER-809).

  This value is automatically set to the same value as UserEmailUnique on upgrade to version 3.6 or later.

  See emailgloballyunique for details.

- LDAP/AD Connectivity (REGSERVER-506): The LDAP/AD external authentication reference code has been improved so that all important parameters are in one configuration file.

  The file “ldap_config.php.example” must be duplicated and renamed to “ldap_config.php” on installation. The file parameters should then be modified as required. Further instructions and a description of the parameters is provided in the “ldap_config.php” file.

Registration Server API

- Updated version number of API to 1.0.007.
- Added notifications: the Registration Server can be configured to send a notification when a change is made to a user. To do this, the Provider setting API_ENABLE_NOTIFICATIONS must be set to True, and the setting API_NOTIFICATION_URL must be set to the URL that will receive the notification (TRUS-136).
- The tag <webportal> has been added to the API functions: “searchuser”, “loginuser”, “getuserdata” and “registeruser”. This tag indicates whether the user is permitted to access a Web Portal.

  Note that if the Provider setting ALLOW_WEB_PORTAL_ACCESS is set to permit or deny, the the value returned in the <webportal> tag will reflect this setting, not the value of the user’s Web Portal Access capability bit.

  When calling “setcapability” the <capability> tag may be set to the value “webportal”, in order to set Web Portal Access capability bit.

- The “searchuser” API call now accepts the input tags <distributor>, <reference> and <authid>, which are used to search for users with specific external reference or external authentication ID. These tags can be used in addition to or in place of other search tags. The '*' search wildcard is not recognised which searching for these values.

When searching by `<reference>` and `<authid>` the `<distributor>` will automatically be added to the search conditions (normally this is only done when you set `<onlyownusers>true</onlyownusers>`).

Note that setting `<distributor>` to a value other than your own Provider code is only permitted if you are the "Default Provider". Web Portals working on the behalf of a Provider may also set the `<distributor>` tag accordingly.

- The "registeruser" API call now returns a `<userdata>` block with the complete details of the user. The `<username>` outside of the `<userdata>` block has been deprecated and will be removed in version 4.0.
- Added the Provider setting `EXT_LICENCE_REF_UNIQUE`, default `True`. If set to `False` duplicate license references are allowed (REGSERVER-1130).
- Removed the Provider setting `CLIENT_DEFAULTLICREF`. The license reference must now be provided as parameter to the API call (REGSERVER-1130).
- The `<licensereference>` tag can now be used to specify the license in place of the `<licensenumber>` tag (REGSERVER-808). Note that the license reference must be unique for each Provider, if `EXT_LICENCE_REF_UNIQUE` is set to `True` (which is the default).
- Added the "sendtemplatemail" API call. This call can be used to sent standard template based emails to user, Providers or some other recipient (REGSERVER-1103).
- Added lookup of an Email on TDNS to the "tdnslookup" call. The result is a list of Registration Servers (REGSERVER-1113).
- Client API: the client version will now be extracted from the path: "/teamdrive/clientversion", in addition to the paths used previously. Command names are case-insensitive.

Administration Console

- Added "Delete Provider" Functionality (REGSERVER-1127). Deleting a Provider will delete all user, licenses and depots that belong to the Provider. If the Reg Server is connected to TDNS, the delete process will be suspended until the Provider has been removed from TDNS.
- If too many failed logins are detected for a user, further attempts are subjected to a delay that increases with the number of login attempts, up to a maximum delay of 2 minutes. The previous system of a constant 5 second delay will still be used if the user login is protected by the LOGIN_IP Provider setting (REGSERVER-534)
- Added an option to move spaces from one depot to another (REGSERVER-1116)
- Depot change history can be displayed on the edit-user page, when available (REGSERVER-1040)
- A users Spaces are fetched more efficiently when displaying them on the edit-user page, which solves some browser memory problems when a user has a lot of spaces. Unfortunately this also means that the list of spaces can no longer be sorted (REGSERVER-1122)
- The list of spaces on the edit-user page can now be exported as a CSV document (eg. for opening in Excel) (REGSERVER-1128)
- Users can now be added or removed from a license on the edit-license page (REGSERVER-1129)
- Changing a license owner can now be done only via the edit-license page. The function has been removed from the edit-user and license overwiew pages to avoid confusion with the 'add user to license' function (REGSERVER-1129)
- The Admin Console now displays the Host Server version number. The version number is only correctly updated with Host Server version 3.6.1 or later. Otherwise, the number displayed is the version of the original Host Server installation. Note that, in this case, the version number displayed is of the form: <major>.<minor>.**.<patch>, for example: Host Server version 3.0.011 (for example) is displayed as: 03.00.**.00011.

15.2 Change Log - Version 3.5

15.2.1 3.5.10 (YYYY-MM-DD)

Registration Server API

- The `<licensekey>` tag should be uses in place of `<licensenumber>` in calls that accept this as an input paramater. `<licensenumber>` will still be accepted, but has been deprecated and will be removed in Registration Server version 4.0.
- The "searchuser" API function returns `<licensekey>` instead of `<licensenumber>` (as added in 3.5.9).
- The API calls: "searchuser", "getuserdata", "getlicensedata", "getdefaultlicense", "getusedlicense", "createlicense" and "createlicensewithoutuser" now return the tag `<licensekey>` in addition to `<number>`. The contents is the same. The `<number>` tag is deprecated and will be removed in a future version.

15.2.2 3.5.9 (2017-01-16)

- Avoid adding or removing the depot owner from the user list (REGSERVER-1158)
- Added a new server PrivacyURL and Provider redirect page

Registration Server API

- Added `<showlicense>true/false</showlicense>` tag to the "searchuser" API call. When set to `true`, license information is returned in the result. This includes `<licensenumber>`, `<featurevalue>` and `<licensestatus>` tags in the `<user>` tag which indicate the current license set for the user, and the features of the license. A `<licenselist>` tag is also returned with a list of the licenses that belong to the user.

15.2.3 3.5.8 (2016-08-26)

Note: Version 3.5.8 will fix an error in the depot documents as described below in REGSERVER-1141. To save the successull update the file /var/opt/td-regserver/StartupCache.pbt will be updated. This might fail in case of the wrong user "root" ownership. Please correct the ownership with:

```
chown apache:apache /var/opt/td-regserver/StartupCache.pbt
```

Note: Updating the registration server on CentOS 7 with "yum update" might update the apache to a newer version. This update could re-install the deleted "conf"-files in the folder `/etc/httpd/conf.modules.d/` and will prevent starting the apache. Please follow the modified instruction to disable all modules in the "conf"-files instead of deleting them as described in configure-apache-24

- Documented additional client settings and ordered client settings alphabetically.
- Fixed the problem that email notifications, such as comments on files, to users on other Registration Servers were ignored. In future, only registered and activated users will be able to send emails. However, the sender can specify an email address instead of a username, in order to send a notification to non-registered users, or users on other Registration Servers (REGSERVER-1147).
- The Host Server may return a Depot document with a SERVERFLAGS field with an incorrect terminator. These documents will be corrected in the database and when returned by the Host Server (REGSERVER-1141).

- Fixed a bug in “wipedevice” API call (REGSERVER-1139)
- The Admin Console will make requests to hostservers over the hostserver proxy, if one is configured (REGSERVER-1148)

15.2.4 3.5.7 (2016-07-12)

- Fixed a bug in “createlicense” API call: if the user has no other default license, then the created license will now be correctly set as the default.
- The [[GREETING]] in emails templates: “inv-user-invited-passwd” and “inv-user-invited”, incorrectly used the name of the sender of the invitation, instead if the invitee (REGSERVER-1136).
- Deleting users, depots, or spaces in the Adminconsole now requires the user to type the word ‘DELETE’ in a confirmation dialog, to prevent accidental deletion (REGSERVER-1133)

15.2.5 3.5.6 (2016-06-21)

- The ssl configuration has changed. All settings are now located in a separate configuration file. Please remove the old configuration in your ssl.conf:

  ```
  RewriteEngine on
  RewriteLogLevel 0
  RewriteLog "/var/log/httpd/rewrite.log"

  RewriteRule ^/setup$ /setup/ [R]
  RewriteRule ^/setup(.*) /yvva/setup$1 [PT]
  RewriteRule ^/pbas/td2as/(.*)$ /yvva/$1 [PT]
  RewriteRule ^/pbas/td2api/(.*)$ /yvva/$1 [PT]
  ```

  and add the new include as described in chapter configure-mod-ssl
- The authenticate call now handles authentication tokens that do not contain an email address. The allows an external Authentication Service prevent the automatic creation of a user if the user does not exist.

  If the email address is missing from the authentication token then the Registration Server will return the “user not found” error if the user ID in the authentication does not match an existing user.

  As before the user ID in the token is compared to the “External Authentication ID” field of the user. This field can be edited in the Admin Console, if `USE_AUTH_SERVICE` is enabled (set to `True`). If users are not created automatically then it is most likely that this field must be set manually when the user is created.

  The alternative is to import the value of the “External Authentication ID” when creating and users using the CSV import facility.
- Updated Yvva version to 1.3.6 (required with CentOS 7)

15.2.6 3.5.5 (2016-05-14)

- Add support for CentOS 7 with apache 2.4
- When a user is removed, if the users licenses are not removed, the licenses are now correctly freed so the may be assigned to another user (REGSERVER-1120) . Note that the default license is no longer a default license when freed.
- Corrected handling of default license. This could be overbooked (REGSERVER-1119). If a default license is assigned to the owner, and it is overbooked, then it will now be automatically removed from a number of users as required. Removal begins with less active users (users that accessed a device more recently will be favoured when removing licenses).

When a license is removed, the user license is reset to the user's default. Note that this may fail if the user is not the owner of his/her default license, which may be the case when using the `DEFAULT_LICENSEKEY` Provider setting.

- When changing the Provider of a user update of TDNS was not correct in the case when the case-sensitivity of usernames changed (REGSERVER-361).
- Added `<intresult>` tag to result of "createlicense" API call.
- No longer send email notification message for 4.3.1 clients, because they are able to synchronise user data using the "mod protocol" (REGSERVER-1110).

Registration Server API

- The order of the XML tags in the API documentation now matches the actually order of tags returned by the server. Some tags that were ommitted have been added (REGSERVER-949).

15.2.7 3.5.4 (2016-01-25)

- The contents of the <message> tag in an exception was not correctly encoded which lead to invalid XML returned by the DISTRIBUTOR_REDIRECT (-30004) exception, which includes a URL in the message tag.
- Fixed a crash which could occur when assigning a license to a user with a device that was not activated (REGSERVER-1104)
- /bal/*html and /act/*html URLs were incorrectly returning "text/xml" as content type. This has been changed to "text/html" (REGSERVER-1106).

15.2.8 3.5.3 (2016-01-14)

- Added a "Registration Server How To's" chapter to the Admin Guide.
- The transfer limit for depots on hostservers that do not enforce the traffic limit is now displayed as 'Unlimited' (REGSERVER-742)
- Added ',' to the reserved characters that are not allowed in usernames. This is in addition to ';' and '$'.
- When `DEFAULT_LICENSEKEY` is specified the setting `PROFESSIONAL_TRIAL_PERIOD` no longer has an effect. It is considered to be 0, which means that no trial period is available.
- `ClientPollInterval` was incorrectly stored in the database in seconds by the Admin Console. The unit used in the database is 0.2 seconds (i.e. seconds x 5). This has been corrected. Default value is 60 seconds, as before.
- Fixed a bug editing / deleting depots belonging to a Provider other than the default Provider
- Implemented "one-off-secureoffice-trial" license purchase. This will allow users to start a trial period when using the SecureOffice version of TeamDrive.
- Removed the following Registration Server settings: `MediaURL`, `NotificationURL`, `RedirectorURL`, `UpdateAvailableURL`. All these Settings now use hard-coded URLs that reference the Registration Server (REGSERVER-1100).
- Removed all references to `providerinfo.html` and `clientinfopage.php`. These were used as default redirect pages. Now, if no redirect URL is set, the Registration Server will return a HTML page with a messsage. For example, if a forum URL is not specified by the Provider (`REDIRECT_FORUM` setting), or in the Registration Server setting (`ForumURL`), then a page with the message: "Sorry, your service Provider has not specified a forum page", will be returned (REGSERVER-1080).
- The `LoadBalancerURL` may contain multiple URLs separated by a '|' character. In this case, the TeamDrive Clients will automatically use a different URL for each call the Registration Server.

- Removed `BalanceURL` Registration Server setting. TeamDrive Clients that still use this setting will be directed to a hard-coded URL on the Registration Server: `http://<reg-server-domain>/pbas/td2as/bal/server.xml` (REGSERVER-917).
- Fixed the "MAIL FROM:" header in emails sent. The Reg Server now correctly sets this field according to the `MAIL_SENDER_EMAIL` Provider setting (REGSERVER-1099)
- Fixed a bug: the language passed to the Reg Server on registration was incorrectly converted to upper case and stripped of the location information. The unconverted language sent by the Client is now stored in the database (REGSERVER-1097)
- Fixed a bug in the admin console displaying the license language when editing (REGSERVER-1096)
- The Reg Server now supports a single Web Portal that manages internet access for multiple providers. This means that Multiple providers can use the same IP number in the `API_WEB_PORTAL_IP` setting (REGSERVER-1095)

Registration Server API

- The "registeruser" API call will now always returns a <username> tag as well as the standard <intresult> tag on success. For example:

  ```
  <teamdrive><username>$NEW1-1061</username><intresult>0</intresult></teamdrive>
  ```

  This is useful if the caller wishes to know the magic username generated by the server (REGSERVER-838).
- If a user is created via the API, or by CSV import, then it may not be known which language the user will use. In this case the language may be set to "-". The "-" will be ignored by the TeamDrive Client. API calls will return the default language in this case (REGSERVER-1097)

15.2.9 3.5.2 (2015-12-04)

- Fixed API function "setdistributor" to handle more than one depot in case of switchdepot = true (REGSERVER-1087)
- Fixed sending a store forward invitation in case of device not found fails, if sender is registered at a foreign Reg-Server (REGSERVER-1088)
- AdminConsole: Fixed misleading error message in case of deleting a user

Registration Server API

- Changed API function "confirmuserdelete": allow using the call without sending the user password (REGSERVER-1089)
- Fixed sending Store Forward invitation for a "standalone" Registration Server (REGSERVER-1092)

15.2.10 3.5.1 (2015-11-04)

- Fixed api call "setdepotforuser" and "removedepotfromuser": The depot information sent to the clients used a wrong format (REGSERVER-1085)
- API log view in the admin console will now display API requests from the Web-Portal (REGSERVER-1083)
- Greetings macro was not replaced in mail templates (REGSERVER-1079)
- Added hint in the admin console to show if the background task for sending mails and processing other background tasks is running (REGSERVER-1078)
- Fixed API access in the Apache configuration using the URL from older API documentations (using ../td2api/.. in the URL instead of ../td2as/..) (REGSERVER-1071)

- Fixed deleting a depot for an user in the admin console. Depot was deleted on the Host Server, but the reference on the Registration Server was not removed (REGSERVER-1070)
- Fixed access to missing language column in the email change confirmation page (REGSERVER-1069)
- Fixed wrong path to tdlibs-library folder in upload.php (REGSERVER-1067)
- Changed the default value for the setting TDNSAutoWhiteList to `True` (REGSERVER-1072) and handle the special case of the Master-Server when changing the setting back to false in the admin console. Master-Server could only be disabled when using a white label client (REGSERVER-1073)
- Fixed api call "getusedlicense" to avoid duplicate usernames in user list (REGSERVER-1066)
- Fixed connecting TeamDrive Master Server during the setup in case of server-type "standalone" (REGSERVER-1064)
- Replaced TeamDrive 3 screenshot with TeamDrive 4 in chapter "TeamDrive Client-Server interaction" (REGSERVER-977)
- Added hint in documentation to enable HTTPS for the API communication between Registration Server and Hosting Server (REGSERVER-499)

Registration Server API

- Added API call "changelicensepassword" (REGSERVER-1075) and use bcrypt for license password encryption (REGSERVER-965)

15.2.11 3.5.0 (2015-09-21)

TeamDrive Registration Server version 3.5 is the next major public release following after version 3.0.018.

Note: Please note the the version numbering scheme for the Registration Server has been changed starting with version 3.5. The first two digits of the version string now identify a released version with a fixed feature set. The third digit, e.g. "3.5.1" now identifies the patch version, which increases for every public release that includes backwards-compatible bug or security fixes. A fourth digit identifies the build number and ususually remains at zero, unless a rebuild/republishing of a release based on the same code base has to be performed (e.g. to fix a build or packaging issue that has no effect on the functionality or feature set).

Version 3.5 of the Registration Server contains the following features and notable differences compared to version 3.0.018. This includes all changes made for version 3.0.019, which was an internal interim release used to deploy and test most of the new functionality described below.

Installation

- The initial configuration and initialization of a Registration Server is no longer performed by filling out the `RegServerSetup.xml` file and running the `RegServerSetup.pbt` script on the command line. Instead, a web-based setup process has been implemented, which guides the administrator through the steps involved.
- The Registration Server no longer depends on the PrimeBase Application Environment (e.g. the `mod_pbt` Apache module or the `pbac` command line client), provided by the RPM package `PrimeBase_TD` in version 3.0.018). Instead, it is now based on the Yvva Runtime Environment which is already used for the TeamDrive Host Server since version 3.0.013 and newer. The environment is provided by the `yvva` RPM package, which will automatically replace any installed `PrimeBase_TD` RPM package during an upgrade. The central log file `/var/log/td-regserver.log` is the central log location for all Yvva-based components; the previous log files (e.g. `/var/log/pbt_mod.trace`, `/var/log/pbvm.log` or `/var/log/pbac_mailer.log`) will no longer be used.

- The Apache HTTP Server configuration file for the Registration Server has been renamed from /etc/httpd/conf.d/pbt.conf to /etc/httpd/conf.d/td-regserver.httpd.conf.
- The installation no longer requires the Apache HTTP Server to be configured using the "worker" MPM, which simplifies the overall installation and configuration of the base operating system and allows for using the PHP Apache module instead of the FastCGI implementation for the Administration Console.
- The login credentials required to access the Registration Server's MySQL database server are now stored in a single configuration file /etc/td-regserver.my.cnf, which is consulted by all components (e.g. the Administration Console, Registration Server or the Auto Task background service).
- The background service providing the Registration Server Auto Tasks has been renamed from teamdrive to td-regserver and is now based on the yvvad daemon instead of the PrimeBase Application Client pbac. Please make sure to update any monitoring systems that check for the existence of running processes. The configuration of the td-regserver background service is stored in file /etc/td-regserver.conf.
- The PBT-based code of the Registration Server is no longer installed in the directory /usr/local/primebase. The content of the td-regserver RPM package has been restructured and relocated to the directory /opt/teamdrive/regserver.

Registration Server Functionality

- Added support for the new business model introduced with TeamDrive 4 Clients (e.g. full support for trial licenses with an expiration date, restricted Client functionality via Client settings).
- The CSV import of users is no longer performed by a cron job running a separate PHP script anymore. Instead, there is now an additional "CSV Import" Auto Task that provides this functionality.
- Email and HTML activation page templates are no longer stored and managed in the Registration Server's file system. Instead, they are now stored in the Registration Server's database and managed via the Registration Server Administration Console. During an upgrade from a previous version, any existing template files will be imported from the file system into the database. As a result, the following server settings have have been deprecated and will be removed during an upgrade: PathToEMailTemplates, ActivationURL, ActivationHtdocsPath, HTDocsDirectory.
- The "Move Store Forward Messages" Auto Task has been removed, as it's no longer required. Store Forward invitations are now forwarded automatically, when a user installs a new device.
- Some license related Provider settings have been moved from the CLIENT category to the more appropriate LICENSE category, namely CLIENT_DEFAULTLICREF, DEFAULT_FREE_FEATURE and DEFAULT_LICENSEKEY.
- The Provider setting API/API_USE_SSL_FOR_HOST has been moved into the more appropriate HOSTSERVER category.
- A number of Server Settings that used to apply to all providers hosted on a Registration Server can now be defined on the Provider level. The following Provider settings have been added:
  - API/API_REQUEST_LOGGING: Set to True to enable logging of API requests in the API log. The value is False by default.
  - EMAIL/USE_SENDER_EMAIL: Set to True if you wish to use the actual email address of the user when sending emails to unregistered users, otherwise the value of EMAIL_SENDER_EMAIL is always used.
  - HOSTSERVER/AUTO_DISTRIBUTE_DEPOT: Set to True if the Depot should be distributed automatically.
  - LICENSE/ALLOW_CREATE_LICENSE: Set to True to allow the creation of licenses. The value is False by default and can only be changed by the default Provider.
  - LICENSE/ALLOW_MANAGE_LICENSE: Set to True to allow the management of existing licenses. The value is False by default and can only be changed by the default Provider.

- Log messages and errors from the Yvva-based Registration Server components as well as the Administration Console can now be logged via `syslog` as well.

Registration Server API

Numerous enhancements and additions to the Registration Server API, to provide more functionality for integrating with external applications (e.g. web shops).

- Added API call `deletelicense`, which marks a license as "deleted". The API call `cancellicense` will set a license to "disabled" instead of "deleted" now.
- Added API call `tdnslookup`, which performs a lookup at the TeamDrive Name Service (TDNS) to find a given user's Registration Server.
- Added new functions: `deactivateuser`, `disableuser`, `enableuser`, updated API reference documentation accordingly.
- Added new function `setdepartment` to set the department reference for a user.

Administration Console

Various security and usability enhancements as well as modifications to support changes made to the Registration Server API and functionality.

Usability Improvements

- Re-organized the navigation for the various Administraion Console pages, ordered and grouped them in a more logical fashion.
- Error messages when making changes to the Provider or Registration Server Settings are now displayed more prominently.
- The Administration Console now prohibits the manual creation of Depot files for system users such as a Host Server's `tdhosting-<hostname>` user.
- The workflow of the **Create Depot** page has been reworked to be more straightforward, and will perform better validation to prevent users from different providers getting assigned to the same Depot. The form now also allows creating a depot as the default depot for the selected user. (REGSERVER-700, REGSERVER-907, REGSERVER-913)
- The login page now displays a notice to enable JavaScript if JavaScript is disabled in the user's browser. (REGSERVER-916)
- You can now filter the license table by expiry date, contract number, and holder email. The contract number and holder email have been added to the table, and the rest of the columns have been compacted slightly to create more space. (REGSERVER-885)
- Trial licenses are marked with a "Trial: <end date>" tag in the "More Details" section of the user overview table, the user editing page, and the license overview. (REGSERVER-891)
- The user overview will display 'N/A' rather than 'Free' as the user's highest license, if the user has no installations yet. (REGSERVER-904)
- Banner management: Example banner elements are now downloaded with an appropriate file name. (REGSERVER-725)
- Searching for a username on the main user list is now case insensitive when the entire username is provided. (REGSERVER-906)
- Most of the input forms on the Administration Console will automatically trim leading and trailing whitespace from text fields. (REGSERVER-912)
- Can reset/delete multiple messages in the email queue at once (REGSERVER-773)

- Can delete multiple CSV-import log files at once (REGSERVER-990)
- The email templates are sorted into categories which can be shown or hidden. Categories of templates that are not relevant (based on Provider settings) are hidden by default (REGSERVER-1026)
- The Create-provider dialog will only show the TDNS related fields if TDNS access is enabled in the registration server settings (REGSERVER-1032)
- Multiple spaces can be deleted at once, without requiring a complete page reload (REGSERVER-573)
- Deleted licenses are hidden by default, and can be shown by setting a filter option (REGSERVER-825)
- Merged the "LoginSecurity" server settings group into the "Security" group
- Edited some table column labels to be more descriptive (REGSERVER-1057)

Security Enhancements

- The Administration Console can now be configured to require two-factor authentication via email for users that want to log in. The Provider-specific setting `LOGIN_TWO_FACTOR_AUTH` can be used to enable this feature. Two-factor authentication is disabled by default.
- A Password complexity level is now indicated when creating/changing passwords.
- Security relevant events are logged either into a local log file `/var/log/td-adminconsole.log` or via `syslog`. In particular, the following events are logged:
  - Failed logins
  - Failed two-factor authorization attempts
  - Changes to security-related Provider/Server settings (e.g. login timeouts, API access lists, etc.)
  - Password changes
  - Changes to the privileges of users
  - Failed session validations
- If, on login, the user already has an active session, require a two-factor authentication step.
- Added server settings that can be used to limit the number of records that may be viewed in the console. (`SearchResultLimit`, `UserRecordLimit`, `UserRecordLimitInterval`)
- When, on login, the user already has an active session, there is the option to immediately end existing sessions (after completing the two- factor authentication step) (REGSERVER-1036)
- The `Manage Servers` page no longer lists all servers on the TDNS network. Instead, there is an option to either enable/disable communication with all other Registration Servers, and exceptions to the chosen default need to be set by entering the exact server name. This is done so that the name of a customer's Registration Server is not automatically visible to everyone else on the TDNS network (REGSERVER-1042).

Added Functionality

- It is now possible to edit the list of users belonging to a Space Depot on the user editing page (REGSERVER-905). Editing of Depots (change limits, delete, activate, etc.) now takes place in a separate dialogue.
- Added a page that can be used to edit the HTML templates for web pages.
- The Administration Console now adds the `<changeinfo>` tag to the following Host Server API calls: `createDepot`, `(de)activateDepot`, and `createDepot`.
- Added functionality to resend Depot information to the user. (REGSERVER-896)
- The Administration Console now uses the Registration Server API to enable/disable/wipe users. (REGSERVER-803)

- Licenses will now be marked as "deleted" with the new `deletelicense` API function. (REGSERVER-883)
- Removing a user from a license will now also remove that license from the user's devices. (REGSERVER-720)
- Licenses are edited strictly via the API, added the **Send email** button to all forms, made license type editable.
- Added support for the new API calls, added support to manage the new license feature flag "Restricted Client" (which allows to enable configurable Client-side restrictions like the maximum number of Spaces).
- Client log files and support requests can now be viewed on the "Download Client Log Files" page. The default Provider can view log files for all providers. (REGSERVER-1025 and REGSERVER-1024)
- If the default Provider has assigned a hostserver to another Provider via the HOST_SERVER_NAME setting, the other Provider will be able to create depots on that server even if the Provider would not normally have access to the server

15.3 Change Log - Version 3.0.019

15.3.1 3.0.019.8

- Fixed the key-repository count on the edit-user page (REGSERVER-1020)
- Fixed an issue where the Administration console was not using the correct API functions when adding or removing users from a depot (REGSERVER-1061)

15.3.2 3.0.019.7 (2015-07-08)

- Fix for handling update notifications between version 3.x and 4.x. 3.x clients will not get a 4.x upgrade notification (REGSERVER-985)

15.3.3 3.0.019.6 (2015-07-07)

- Can now set the newsletter capability bit when creating and editing users (REGSERVER-1010, REGSERVER-1015, REGSERVER-1008, REGSERVER-1007)
- Added new templates to confirm recieving a newsletter (REGSERVER-1009)
- Handle messages larger 20K to use 1.0 encryption to avoid timeouts (500x faster than 2.x encryption) (REGSERVER-1014, REGSERVER-1012, REGSERVER-418)

15.3.4 3.0.019.5 (2015-06-23)

- Fixed bug caused by WEB_PORTAL_IP handling (REGSERVER-969)
- Administration Console: Support Host Server version 3.0.010 (REGSERVER-976)
- Extend TDNSRequest to handle Provider Code returned from TDNS (REGSERVER-980)
- Handling update notifications between version 3.x and 4.x. 3.x clients will not get a 4.x upgrade notification (REGSERVER-985)
- Activation code length for email change reduced (same logic as requesting a new password)
- API: upgradedefaultlicense and downgradedefaultlicense accepts the feature strings instead of license bits

15.3.5 3.0.019.4 (2015-06-02)

- Administration Console: It is now possible to edit the list of users belonging to a Space Depot on the user editing page (REGSERVER-905). Editing of Depots (change limits, delete, activate, etc.) now takes place in a separate dialogue.
- Administration Console: Display a notice to enable JavaScript if JavaScript is disabled in the user's browser. (REGSERVER-916)
- Administration Console: fixed a bug that could cause entries in the license- change history to appear in the wrong order (REGSERVER-943)
- API: Function setreference() use newreference XML tag (REGSERVER-936)
- Fixed access to statistic database (REGSERVER-941)
- API: Added tdnslookup-call (REGSERVER-956)
- API: Fixed searchuser-call (handling user and device status)
- API: Security improvement when to switch distributor
- API: Added WEB_PORTAL_IP to allow API access from the web prtal

15.3.6 3.0.019.3 (2015-04-09)

- Administration Console: Fixed a bug then when editing licenses, the correct license type will now be displayed.
- Administration Console: Select the 'yearly' license type by default when creating licenses.
- Administration Console: Will send the correct license-type identifier to the API when creating TDPS licenses.
- Administration Console: The Administration Console now uses the Registration Server API to enable/disable/wipe users. (REGSERVER-803)
- Administration Console: Added functionality to resend Depot information to the user. (REGSERVER-896)
- Administration Console: You can now filter the license table by expiry date, contract number, and holder email. The contract number and holder email have been added to the table, and the rest of the columns have been compacted slightly to create more space. (REGSERVER-885)
- Administration Console: Trial licenses are marked with a "Trial: <end date>" tag in the "More Details" section of the user overview table, the user editing page, and the license overview. (REGSERVER-891)
- Administration Console: Licenses will now be deleted with the new `deletelicense` API function. (REGSERVER-883)
- Administration Console: The user overview will display 'N/A' rather than 'Free' as the user's highest license, if the user has no installations yet. (REGSERVER-904)
- Administration Console: The **Create Depot** page has been reworked to be more straightforward, and will perform better validation to prevent users from different providers getting assigned to the same Depot. The form now also allows creating a depot as the default depot for the selected user. (REGSERVER-700, REGSERVER-907, REGSERVER-913)
- Administration Console: Searching for a username on the main user list is now case insensitive when the entire username is provided. (REGSERVER-906)
- Administration Console: Most of the input forms on the Administration Console will automatically trim leading and trailing whitespace from text fields. (REGSERVER-912)
- API: Fixed a bug in the `wipedevice` function that prevented the "wipeout pending" flag to be set. (REGSERVER-892)
- API: Fixed a bug in the `sendinvitation` function that caused additional Depots not longer to be sent to a user's devices. (REGSERVER-896)

- API: Fixed a bug creating default licenses for a user belonging to a different Provider. (REGSERVER-889)
- Installation: Fixed a minor syntax error in RegServerSetup.pbt
- See the *3.0.018.8 (2015-04-07)* (page 91) change log for additional changes.

15.3.7 3.0.019.2 (2015-03-05)

- Administration Console: Added support for setting the `restricted` feature flag on licenses (previously labeled `enterprise`).
- Administration Console/Documentation: Updated the TeamDrive logo to the new branding.
- Administration Console: Check a license's `extreference` before allow editing of TDPS licenses. (REGSERVER-855)
- Administration Console: Continue to show only the selected license after jumping to a specific license in `licenceAdmin.php` and then removing a user from it.
- Administration Console: Licenses are edited strictly via the API, added the **Send email** button to all forms, made license type editable.
- API: Added new functions: `deactivateuser`, `disableuser`, `enableuser`, updated API reference documentation accordingly.
- Registration Server: added check to handle an empty `LicenseEmail` field when sending out license change notifications to a Provider. (REGSERVER-871)
- See the *3.0.018.7 (2015-03-05)* (page 92) change log for additional changes.

15.3.8 3.0.019.1 (2015-02-19)

- API: Added new function `setdepartment` to set the department reference for a user.
- Administration Console: Added `<changeinfo>` to the following Host Server API calls: `createDepot`, `(de)activateDepot`, and `createDepot`.
- Registration Server: Fixed bug in returning the Server's capability bits to the Client.
- See the *3.0.018.6 (2015-02-19)* (page 92) change log for additional changes.

15.3.9 3.0.019.0 (2015-01-22)

TeamDrive Registration Server version 3.0.019 is the next major release following after version 3.0.018 (based on 3.0.018.5).

Version 3.0.019 contains the following features and notable differences compared to version 3.0.018:

- Support for the new business model introduced with TeamDrive 4 Clients (e.g. full support for trial licenses with an expiration date, restrict Client functionality via settings).
- Numerous enhancements and additions to the Registration Server API, to provide more functionality for integrating with external applications (e.g. web shops).
- Administration Console: added support for the new API calls, added support to manage the new license feature flag "Restricted Client" (which allows to enable configurable Client-side restrictions like the maximum number of Spaces).
- API call `removeuserfromlicense` failed in case of empty `<changeid>`
- Added API call `deletelicense`. The API call `cancellicense` will set a license to disabled instead of deleted now.
- Administration Console: The workflow of the **Create Depot** page has been improved and now allows creating default Depots for users that do not yet have a default Depot.

- Administration Console: can set whether or not a user should receive the newsletter when creating and editing users

15.4 Change Log - Version 3.0.018

15.4.1 3.0.018.9

- Administration Console: update copyright date (REGSERVER-915)
- Administration Console: fixed a session-handling issue related to parallel ajax requests (the result would usually be a “session variables not set” error in the Admin Console)

15.4.2 3.0.018.8 (2015-04-07)

- Administration Console: prevent editing of the `valid until` license field for licenses that are not either in the `active` or `expired` phase, as this may cause problems with the `restricted` license feature. (REGSERVER-886)
- Administration Console: the `restricted` license feature flag will be sent to the API as `restricted` rather than `enterprise` (REGSERVER-869)
- Administration Console: Restricted licenses are marked with `(Restricted)` on the user overview and user details pages. (REGSERVER-877)
- Administration Console: Allow displaying and entering language codes longer than two characters on the user editing page. (REGSERVER-898)
- Administration Console: Fixed a bug that caused an incorrect count of a user’s installations and invitations on the user overview page. (REGSERVER-901)
- Administration Console: Fixed a bug on the edit-user page that prevented editing users that had been flagged for deletion. (REGSERVER-902)
- Administration Console: The Administration Console will now send the affected user’s Provider Code instead of the Provider Code of the user logged into the Administration Console when creating Depots and inviting other users to that Depot. (TRUS-61)
- API: The API now allows setting language codes as defined in **RFC 5646** (e.g. `en_US` or `de_DE`) which will be used by TD4 clients when registering a new user. (REGSERVER-898)
- Registration Server: Improved error logging: the output of several error messages (e.g. error codes -24916, -24919, -24909, -24913 or -24912) is now truncated and reduced to the relevant parts.

  Error messages are now dumped in the following form:

  ```
  03/16/2015 15:23:19 #1 ERROR: ERROR -24777: "reg_shared.pbt"@client line 183:
  This is an error! [command=setparcels;device=377]
  ```

  The Registration Server now reads out the log level defined in variable 342 of the `pbvm.env` configuration file so that it is used in code run by the PBT Apache module `mod_pbt` (previously, the log level was ignored by the PBT module). Valid log values are: 0=Off, 1=Errors, 2=Warnings, 3=Trace. (REGSERVER-859)
- Registration Server: When creating a new device, the device now receives the same license as all other devices, independent of the license’s status. (REGSERVER-888)
- Documentation: Fixed link structure in the HTML documentation so that clicking **Next** and **Previous** works as expected (REGSERVER-908)
- Documentation: Removed the chapter that describes the MySQL databases and tables that will be installed from the Reference Guide. (REGSERVER-899)

15.4.3 3.0.018.7 (2015-03-05)

- Administration Console: Added support for setting the `restricted` feature flag on licenses (previously labeled `enterprise`).
- Administration console: Updated list of template types viewed in the mail queue view. (REGSERVER-841)
- Administration console: Updated misleading text when viewing device messages from users located on another server. (REGSERVER-839)
- Registration Server: Fixed that `ProfileDataExchangeEnabled` was not checked when changing a user's email address and the Registration Server database schema has not been converted to the 3.0.018 schema. (REGSERVER-849)
- API: Fixed that `UserEmailUnique` was not enforced when registering users via the API. (REGSERVER-730)
- API: Added support for setting the "Restricted" license flag, which can be used to disable/limit certain TD 4 Client functionality. Previously, this feature flag was labeled "Enterprise", but it was not actively used. (REGSERVER-867)
- Registration Server: Added missing Provider setting `REDIRECT/REDIRECT_HOME` that sets the Provider's home page URL used in the user's start menu. (REGSERVER-851)
- Registration Server: fixed mail template fallback code to fall back to the English templates as a last resort, if a default template in the Provider's default language is not available. (REGSERVER-858)
- Documentation: Updated API chapter and replaced the incorrect statement that the temporary password generated by the "sendpassword" API call expires after a time period of 10 minutes with a notice that a generated temporary password remains active and unchanged until the user's password will be changed. (REGSERVER-870)

15.4.4 3.0.018.6 (2015-02-19)

- Installation: To simplify the configuration for new deployments, the default license issued to Clients is now a Professional license including WebDAV support (the value of `LICENSE/DEFAULT_FREE_FEATURE` was changed from `3` to `10`). This change only affects new Registration Server installations, the setting remains unchanged when updating existing installations. (REGSERVER-821)
- Installation: Updated `mysql_install.sh` to re-create InnoDB log files after changing `innodb_log_file_size` in `my.cnf`. (REGSERVER-847)
- Installation: fixed bug in the `setLicenseExpiryDefault()` upgrade routine which inserted incorrect entries into the `td2reg.TD2OwnerMeta` table for existing licenses having a non-NULL value in the `ValidUntil` column. (REGSERVER-848)

  If you have have performed an upgrade from a previous Registration Server version to version 3.0.018 before (which included calling `setLicenseExpiryDefault()`) **and** you have issued licenses with an expiry date, please perform the following steps to remove the incorrect entries. Start the MySQL client `mysql` as user `teamdrive` and enter the following command to delete the entries:

  ```
  mysql> DELETE FROM td2reg.TD2OwnerMeta \
      -> WHERE Name="ENABLE_LICENSE_EXPIRY" AND \
      -> OwnerID NOT IN (SELECT DISTINCT ID FROM td2reg.TD2Owner);
  ```

  Afterwards, verify the setting `ENABLE_LICENSE_EXPIRY` for all providers hosted on your Registration Server and only set it to `True` when this Provider intends to issue licenses with an expiry date.

  Note that while it was possible to create licenses with an expiry date in previous versions, the Registration Server did not actually check this date prior to version 3.0.018. To avoid an unexpected expiry of existing licenses after upgrading to version 3.0.018, the upgrade function `setLicenseExpiryDefault()` checks all existing licenses during an upgrade and sets the Provider setting `ENABLE_LICENSE_EXPIRY` to `False` for the respective Provider.

- Administration Console: Added missing `<distributor>` field to the `cancellicense` and `resetpassword` API calls that prevented the default Provider from deleting licenses or resetting the user passwords for other providers hosted on the same Registration Server. (REGSERVER-827)
- Administration Console: Fixed bug where **View mail queue** did not show all queued email messages (outgoing invitation emails to unregistered users were not displayed). (REGSERVER-818)
- Administration Console: when importing email templates from the file system into the database, line endings are now automatically converted to be properly terminated with CRLF (`\r\n`)
- Admin Console: Fixed error message `API error code: -30100,message: User name not provided` when deleting a user's default Depot (the Depot was still deleted as requested). (REGSERVER-835)
- Administration Console: updated the regular expression that checks for valid URLs in the the `LogUploadURL` field to accept URLs beginning with `https` as well. (REGSERVER-837)

  Note that this change is not applied automatically to the configuration table during an update. For existing installations, you need to update the field `Format` in table `td2reg.TD2Setting` for this setting as follows, if you want to change the URL via the Administration Console:

  ```
  mysql> UPDATE td2reg.TD2Setting \
  SET Format="^(http|https)://[a-zA-Z0-9\-\./]+/.-$" \
  WHERE NAME="LogUploadURL";
  ```

- Administration Console: Fixed bug that prevented users logged into the Admin Console with their "magic username" to set their password. Also improved session handling to not drop the session when a user logged into the Admin Console changes his own password (which invalidated the existing session before).
- API: The call `getuserdata` failed with `User does not exist`, if `USE_EMAIL_AS_REFERENCE` was set to `True` and the email address was used as the user name. (REGSERVER-824)
- Registration Server: When using external authentication, TD4 Clients could sometimes receive spurious logout events, requiring the user to log in again. Please note that this bug fix may cause Clients that use external authentication to logout again *once* after the upgrade. After that, such apparently random log-outs should no longer occur. (REGSERVER-820)
- Registration Server: Fixed wrong path in the fallback routine that is supposed to use the default mail template for templates missing from a Provider's template folder. (REGSERVER-842)
- Registration Server: Fixed bug that caused file comment notification emails to include the recipient's email address in the From:-Header instead of the sender's email address. (REGSERVER-843)
- Registration Server: When changing `HAS_DEFAULT_DEPOT` from `True` to `False`, a user's devices no longer offered a user's already existing default depot for creating Spaces. (REGSERVER-834)
- Registration Server: Outgoing email messages (e.g. Space invitations) could violate **RFC 5321**, if templates did not use the appropriate line termination character sequence (CRLF, `\r\n`). Now, all outgoing email messages are reformatted before submission to the MTA. (REGSERVER-833)
- Registration Server: Fixed bug that prevented users from logging in with their user name in different capitalization if `UserNameCaseInsensitive` was set to `True` (which is the default) (REGSERVER-823)
- Registration Server: Shortened the temporary password that gets generated and mailed to a user when a user's password needs to be changed (e.g. via the "Forgotten Password" option in the Client or via the `sendpassword` API call. Previously, the temporary password consisted of a random MD5 string (32 characters), that turned out to be difficult to handle (e.g. on mobile devices). It now returns a combination of the characters 0-9, a-z and A-Z (excluding 0, O, l and 1, which can be misread). The length of the temporary password now depends on the Client version: 2.x –> 32 characters (unchanged), 3.x –> 8 characters, 4.x –> 5 characters. The 3.x and 4.x Clients have been changed to accept 4 or more characters, the API uses the version of the most recently used device. (REGSERVER-831)
- `upload.php`: Improved security of the PHP script that accepts Client debug log uploads (e.g. to prevent potential XSS attacks), removed absolute path name from the generated upload status file. Note: this script is not included in the RPM distribution and is not installed by default. (REGSERVER-836)

15.4.5 3.0.018.5 (2015-01-23)

- Registration Server: Fixed Space invitation emails to existing users that contained the recipient as the sender in the mail header. (REGSERVER-817)
- Installation: added a new RPM package `td-regserver-doc-html` that contains the Registration Server documentation in HTML format, installed in the Registration Server's Apache document root `/var/www/html/td-regserver-doc/`. Access to the documentation can be restricted by editing `/etc/httpd/conf.d/td-regserver-doc.conf`. (REGSERVER-816)
- Registration Server: disabled banner support for legacy TD 2.x clients

15.4.6 3.0.018.4 (2015-01-13)

- Administration Console: Improved reporting of HTTP errors during API requests. (REGSERVER-798)
- Administration Console: Fixed API error changing a user's email address if the user name contained UTF-8 characters. (REGSERVER-775)
- Administration Console: fixed support for activating/deactivating Space Depots. (REGSERVER-810) This requires Host Server version 3.0.013.8 or later.

15.4.7 3.0.018.3 (2014-12-17)

- Administration Console: fixed incorrect hex encoding of email templates when initially importing them from the file system into the database. (REGSERVER-806)
- Administration Console: added new Reg Server setting `RegServer/RegServerAPIURL` for setting a custom URL to issue Reg Server API requests (e.g. in case of a dedicated API server or if https should be used for API requests). If not set, the API URL will be derived from the `RegServerURL` setting (REGSERVER-799).
- Administration Console: The default Provider can now set new passwords for other providers (REGSERVER-768).
- Installation: removed `<APIChecksumSalt>` from `RegServerSetup.xml` and updated the installation instructions accordingly, to simplify the installation process (this value is generated by `RegServerSetup.pbt` automatically during the initial installation).
- Installation: updated installation instructions and VM installation script to install the `php-mbstring` package (required for the email template import into the database). (REGSERVER-802)
- Installation: updated installation instructions and VM installation script to set `date.timezone` in `/etc/php.ini`, to avoid frequent PHP warning messages when using the CSV import cron job. (REGSERVER-801)
- Installation: the RPM now automatically re-creates the file `StartupCache.pbt` and calls `HTTPRequest.pbt` during an upgrade (e.g. to add new Reg Server settings) (REGSERVER-800)
- Installation: added `max_allowed_packet=2M` to the MySQL configuration file `my.cnf`, to support uploading User Profile information containing profile pictures. In order to support this feature, the `PrimeBase_TD` package also needs to be updated to version 4548.120 or newer (TDCLIENT-1663).
- Installation: changed `MaxRequestsPerChild` in `httpd.conf` from `0` to `10000`, to ensure Apache child processes are restarted from time to time (REGSERVER-762)
- Registration Server: Fixed that `SETTING_TDNS_PROXY_URL` gets overwritten by the `SETTING_HOST_PROXY_URL` setting (in case accessing TDNS requires using a different proxy server than accessing the Host Server (REGSERVER-769).

15.4.8 3.0.018.2 (2014-11-12)

- Fixed bug in propagating email address changes to other devices belonging to a user
- Fixed bug in deleting a user's privileges when deleting the user (REGSERVER-734)
- Fixed issue with store forward messages that were not forwarded to a user upon registration (REGSERVER-759)
- Administration Console: Fixed encoding issue when adding users with usernames containing UTF-8 characters (REGSERVER-756)
- Administration Console: Fixed minor bug in the "Add new Provider settings" menu (REGSERVER-747)
- RegServerSetup.xml: Fixed missing closing bracket in the `APIChecksumSalt` tag.
- API: fixed `addXMLDepot` call that returned invalid URLs when the setting `SIMULATE_REGSERVER_20` was enabled. (REGSERVER-741)

15.4.9 3.0.018.1 (2014-11-05)

TeamDrive Registration Server version 3.0.018 is the next major release following after version 3.0.017.

Version 3.0.018 contains the following features and notable differences compared to version 3.0.017:

- As a security enhancement, TeamDrive user passwords stored on the Registration Server are now hashed using the bcrypt algorithm instead of the previously used salted MD5 method. When logging in with a TeamDrive Client version 3.2.0 (Build: 536) or newer, existing hashed passwords are automatically converted into the new format.
- Changing, invalidating or resetting a user's password now also triggers sending an email to the affected user. For this purpose, the following new mail templates were added: `passwd-changed`, `passwd-invalidated` and `passwd-reset`.
- The Registration Server now supports sharing and synchronizing user profile information across all of the user's devices and with other users, e.g. initials, registration email, profile picture, full name, phone (telephone number), mobile (telephone number). Before, this information was shared with other users on a per-Space basis. Only users that share Spaces are able to exchange profile data with this new method. This feature will be supported by a future TeamDrive Client version.
- The expiry date of licenses is now properly checked via the "Expire Licenses" auto task. Users receive an advance notification 10 and 3 days before the license expires. When the date provided in the **Valid until** field has been reached, the user receives a final notification and his license will be reverted to the default free license. The following email templates were added to facilitate the notification: `license-expirein10days`, `license-expirein3days` and `license-expired-en`. To avoid disruptions/surprises when upgrading from previous Registration Server versions, the update function `setLicenseExpiryDefault()` will set the default value of `ENABLE_LICENSE_EXPIRY` to `False` for providers that already have licenses with an expiry date. When performing a new installation or adding a new Provider, license expiration will be enabled by default.
- Email templates now support the `[[BRAND]]` macro, to replace the term "TeamDrive" with another string if required. This can be defined via the `EMAIL/BRAND_NAME` Provider setting. The default is `TeamDrive`.
- Most parts of the TeamDrive Registration Server installation can now be performed via RPM on Red Hat Enterprise Linux 6 and derivative distributions, which significantly improves the installation procedure and the process of applying updates. In particular, the following components are now provided in the form of RPM packages:
  - The PBT-based Registration Server (td-regserver-5.0.2.0-0.el6.noarch.rpm, files installed in `/usr/local/primebase/setup/scripts`)
  - The PHP-based Administration Console and support files (td-regserver-adminconsole-5.0.2.0-0.el6.noarch.rpm, files installed in `/var/www/html/adminconsole` and `/var/www/html/tdlibs`)

  - The Registration Server documentation in HTML format (td-regserver-doc-html-5.0.2.0-0.el6.noarch.rpm, files installed in the Apache server's document root /var/www/html/td-regserver-doc/, access to the documentation can be restricted by editing /etc/httpd/conf.d/td-regserver-doc.conf).
  - The PrimeBase Application Environment (PrimeBase_TD-4.5.48.<build>-0.el6.x86_64.rpm installed in /usr/local/primebase), including the PrimeBase Apache module mod_pbt (installed in /usr/lib64/httpd/modules/mod_pbt.so) and some support scripts and configuration files in /etc/.

- The installation package now contains a script mysql_install.sh that performs the creation of the required teamdrive MySQL user and populating the databases required for the Registration Server.
- The installation package now contains a log rotation script, to support rotation and compression of the Registration Server's log files.
- The installation now uses the default MySQL data directory location (/var/lib/mysql) instead of defining a custom one (/regdb). The default MySQL configuration settings for my.cnf have been reviewed and adjusted.
- The automatic service startup at bootup time is now configured using the distribution's chkconfig utility instead of changing the Boot options in file /usr/local/primebase/pbstab. The PrimeBase_TD RPM package provides the required SysV init script /etc/init.d/teamdrive to facilitate this.
- The term "Distributor" has been replaced with "Provider" in most occasions.
- The obsolete settings UseExternalAuthentification and UseExternalAuthentificationCall have been removed. External authentication is now enabled by setting AUTHSERVICE/USE_AUTH_SERVICE to True.
- In previous versions, the setting AUTH_VERIFY_PWD_FREQ did not have any effect (it was added without the actual implementation by accident). Starting with version 3.0.018, a user's Clients will be logged out from the TeamDrive Service after the time defined in this setting. To avoid surprises and a change in behaviour after an upgrade, updating from a previous version of the Registration Server suggests calling the update function setLoginFreqToZero(); to change this setting to 0 for any existing Provider.

The PHP-based Administration Console received several new features, numerous usability enhancements and security improvements. Some notable highlights include:

- Tabular output (e.g. a filtered list of users, devices or licenses) can now be exported to CSV files.
- Tabular output now indicates the current sort order and column name with a small arrow icon.
- The columns visible in the table displayed on the **Manage Users** and **Manage Licences** pages are now configurable.
- The summary display of a user's licenses ("Licenses owned" and "Licenses used") on the **Manage Users** page has been simplified.
- The list of Spaces in a user's Depot is now displayed as a sortable table.
- It's now possible to wipe or delete multiple devices of a user at once.
- The Registration Server's Authorization Sequence (required for exchanging invitations with users on other Registration Servers via TDNS) can now be obtained from the Administration Console via **Edit Settings -> RegServer -> AuthorizationSequence**.
- After sucessful registration, a Host Server's activation key is now displayed on the **Manage Servers** page, to simplify the registration process for new Host Servers.
- It is now possible to remove registered Host Servers via the **Manage Servers** page.
- The Administration Console now supports viewing a selection of server log files directly in the web browser instead of requiring logging in on the server's console. The **View Server Logs** page is only visible for the Registration Server's default Provider and any user having the VIEW-LOGS privilege. The list of log files is defined in the (read-only) Reg Server setting ServerLogFiles and can only be modified by updating the setting in the database directly. Log files can only be viewed if the user that the Apache HTTP Server is running under (usually apache) has the required access privileges to view these files.

- Most of the Administration Console Settings are now stored in table `TD2Setting` of the MySQL database instead of the configuration file `tdlibs/globals.php` and can be configured via the Administration Console instead:
  - `LoginSecurity/LoginSessionTimeout` (default: `30`)
  - `LoginSecurity/FailedLoginLog` (default: `/var/log/td-adminconsole-failedlogins.log`)
  - `LoginSecurity/LoginMaxAttempts` (default: `5`)
  - `LoginSecurity/LoginMaxInterval` (default: `60`)
  - `RegServer/ApiLogFile` (default: `/var/log/td-adminconsole-api.log`)
  - `RegServer/RegServerAPIURL` (previously known as `$regServerUrl`, not set by default)
  - `RegServer/ServerTimeZone` (default: `Europe/Berlin`)

  The only information required in `globals.php` is the MySQL connection string to access the Registration Server's MySQL database. Alternatively, these credentials can be provided from a separate MySQL configuration file. See chapter *Admin Console MySQL Configuration* (page 16) for details.
- Disabling a user does no longer provide the **apply to devices** option, as it's sufficient to disable the user to block access to the TeamDrive service.
- A user's Space Depots on a Host Server can be activated/deactivated (added in 3.0.018.4, requires Host Server version 3.0.013.8 or later).
- The default Provider can now set new passwords for other providers (added in 3.0.018.3).
- Changing the Provider setting `AUTHSERVICE/USE_AUTH_SERVICE` to `True` now automatically adds the other required settings like `AUTH_LOGIN_URL` and `VERIFY_AUTH_TOKEN_URL`.
- The Provider filter selection list now also prints the company name after the 4-letter code.
- An option was added to assign an existing license to a user when editing the user's details.
- Various settings that used to expect values in bytes only now provide an option to select other units like "MB" or "GB".
- Input fields that expect a date now provide a date picker, to simplify the entering of dates.
- Filter options by date now provide a more intuitive way to define "before", "at" or "after" the entered date.

15.5 Change Log - Version 3.0.017

15.5.1 30017.13 (2014-09-02)

- Admin Console: show extreference in the license Administration screen
- Security improvement: fixed OS permissions/ownerships of some configuration files and log files containing plaintext passwords (REGSERVER-599)
- Admin Console: Security improvement: Don't display the Console version on the login page (REGSERVER-558)
- Virtual Appliance: set `ServerTokens` to `Prod` and `ServerSignature` to `Off` in `httpd.conf`, to disable displaying the Apache HTTP Server version and OS version in the HTTP headers and on error pages (REGSERVER-608)
- Added missing tag `<APISendEmail>` in `DIST.xml` template file
- Security improvement: disabled unneeded HTTP methods in `pbt.conf` (only allow GET, POST, disable PUT, HEAD, OPTIONS, TRACE) (REGSERVER-613)
- API: added new API call `removedepotfromuser` extended `setdepotforuser`. Fixed bug in `setreference` and removed deprecated `location`-Support in `getHostForDistributor`. Fixed error handling in `setinviteduser`. Updated API-Version number to "1.0.005".

- For monitoring purposes, calling the Reg Server's ping URL with the optional parameter tdns=$true`` (e.g. ``http://regserver.yourdomain.com/pbas/td2as/reg/ping.xml?tdns=$t now also performs a TDNS lookup, to verify that the communication between the Reg Server and TDNS is working properly.

15.5.2 30017.12 (2014-07-09)

- Updated to requiring PrimeBase 4.5.48, updated `pbstab` and documentation accordingly. This version of PrimeBase now installs a shell profile file by default and provides a proper SysV init script that can be used to enable/disable the `pbac_mailer` background task.
- Admin Console: Fixed wrong escaping of HTML characters in the device messages popup (REGSERVER-575)
- Admin Console: changed session timeout from 10m to 30m
- Admin Console: Added more fields to license editing page
- `RegServerSetup.pbt` now sets `APIAllowSettingDistributor` to `true` if another distributor is added (REGSERVER-579)
- Added missing `globalDepotID` to default depots for clients with two accounts on the same server(s). (REGSERVER-583) (this fix also requires an updated Host Server having the fix from HOSTSERVER-326)

15.5.3 30017.11 (2014-06-26)

- Admin Console: "Create Depot" now accepts storage limits in other units than bytes. Unified the UI with regards to selecting a Depot owner and selecting Users to invite (REGSERVER-574)

15.5.4 30017.10 (2014-06-17)

- Admin Console: Added confirmation checkbox for deleting a user's license when deleting the user (REGSERVER-554)
- Admin Console: Improved listing of licenses to no longer show one entry per Device for the same license (REGSERVER-565)
- Admin Console: Replaced "parcel" with "key repository", replaced "Packet" with "Package" in the License creation/editing dialogues (REGSERVER-567)
- Admin Console: Added exporting tables as CSV function.
- Fixed missing `LOG_UPLOADS` setting in `upload.php` log upload script (REGSERVER-559)
- Added Proxy support in `upgradeDefaultDepot`
- Major documentation rewrite: added general reference and API documentation, converted all documents to reStructuredText/Sphinx
- `RegServerSetup.xml`: Fixed incorrect closing tag (`</ProviderInfoURL>` -> `</DownloadURL>`)

15.5.5 30017.9 (2014-04-17)

- Removed misleading error output in `csvimportregserver.php`
- Fixed default license key error using the API (REGSERVER-526)
- Improved description for `StoreRegistrationDeviceIPinSeconds` (REGSERVER-532)
- Admin Console: bugfix for `editUser.php`: wrong user got displayed when changing depot limits.
- Admin Console: `editUser.php` didn't display "extauthid" in all cases (REGSERVER-537)

- Admin Console: Display activation code in device-list entry for deactivated tdhosting “users”

15.5.6 30017.8 (2014-03-27)

- Admin Console: server/distributor settings can now be empty strings (REGSERVER-476)
- Admin Console: displays a warning if LOGIN_IP is not set
- REGSERVER-464: `RegServerSetup.pbt` now prints the Authentication Sequence during initial install
- REGSERVER-494: Sending notification to users located on different Reg-Server returned “remote authorization not allowed”
- Improved error handling in case of empty `hosting_url` or `hosting_name`
- REGSERVER-507: Don’t create users in `p1reg.sql`
- `RegServerSetup.pbt`: Improved screen output for readability and clarity
- `RegServerSetup.xml`: Default for `<TDNSEnabled>` must be `$true` to avoid errors for a default setup
- `CSV_IMPORT_ACTIVE` should not add `CSV_UPLOAD_DIR`, `CSV_ERROR_DIR` and `CSV_SUCCESS_DIR`, because we support import using the database or a hot folder. Default is using the database and therefore the Dir-Settings are not required.
- Packaging: Updated and added `DIST.xml` to the distribution
- Fixed link in `bannerAdmin.php`
- Removed duplicate code in `RegServerSetup.pbt`

15.5.7 30017.7 (2014-03-14)

- Fixed nasty typo in `RegServerSetup.xml`

15.5.8 30017.6 (2014-03-14)

- REGSERVER-478: Deleting `TD2FreeUserStorage` and `TD2Parcel` in case of deleting a user
- `reg_init.pbt`: Now only use the curl-based code to verify external logins (both via http and https)
- External auth: Updated LDAP ext auth example: implement function `base64url` to encode the token, to avoid “+” and “/” being included in the token string.
- REGSERVER-471: Admin Console XSS security fixes related to TD2User
- External auth: fixed REGSERVER-443 (Sample login page defaults to “Password lost”, not “Login”), changed error messages to show the same error regardless if user name or password are wrong.
- Admin Console: moved failed-logins log file to `/var/log/td-adminconsole-failedlogins.log`. NOTE: this log file must now be created during installation

15.5.9 30017.5 (2014-02-25)

- Updated `pbstab` version number from 4546 to 4547
- Added `deleteDistributor` to `RegServerSetup.pbt`
- Executing `HTTPRequest.pbt` in `RegServerSetup.pbt` requires no location
- `RegServerSetup.pbt`: Generate a mysql update script if changes are required to the database structure
- Handle the case that the TD2Setting.Format column does not exist, when creating system variables

15.5.10 30017.4 (2014-02-07)

- REGSERVER-426: Admin Console: changed API log file location to `/var/log/td-adminconsole-api.log`
- Admin Console: added option to edit a depots transfer limit
- REGSERVER-428: Removed duplicate entry `<UserEmailUnique>` from section `<RegServer>` in `RegServerSetup.xml` and `RegServerSetup.pbt`
- Admin Console: improved test to check if the `setDepot` function is available on a host server
- Install `upload.php` into `logupload/upload.php` instead the document root
- Admin: user simply gets a warning when trying to call `setdepot` on a host server that does not support it
- `pbt.conf`: Reduced `mod_pbt` log level from 2 (PBT_TRACE) to 1 (ERROR_TRACE) to reduce default log noise in `/tmp/pbt_mod.trace`
- Admin: fixed regex that prevented changing the `LogUploadURL` setting
- REGSERVER-432: API call upgradelicense no longer throws an error if feature is empty
- Admin Console: the API log now correctly shows entries that don't have usernames
- REGSERVER-436: Setting `HAS_DEFAULT_DEPOT` to true, creates all missing hosting system parameters

15.5.11 30017.3 (2014-02-04)

- Bug fixes: REGSERVER-424, double `<teamdrive>` tag removed, fixed invitations when a user was registered with same e-mail on 2 other Reg Servers, Added Download-URL for invitation mail templates

15.5.12 30017.2 (2014-01-30)

- Renamed `out.log` to `api.log`
- Fixed RegEx for `API_IP_ACCESS`
- Admin Console: Changed default mysql username to teamdrive
- Updated `pbvm.env` to write the log file into `/var/log/pbvm.log` (REGSERVER-423)
- REGSERVER-422: changed the default log file location in pbstab for the `pbac_mailer` from `/tmp/mail.log` to `/var/log/pbac_mailer.log`
- Removed `setup/pbas.env` from the installation package

15.5.13 30017.1 (2014-01-23)

- First build using the scripted build, updated `RegServerSetup.pbt` and included some Admin Console fixes

15.5.14 30017.0 (2013-10-23)

- Not final; Bcrypt is still missing

CHAPTER

SIXTEEN

APPENDIX

16.1 Glossary

Client The software application used by users to interact with the TeamDrive system. Can be customized to various degrees. Every device requires a Client application.

Device A computer used by a user to access the TeamDrive system.

Installation Simply refers to the installation of the client application on a device.

User A person using the TeamDrive System.

Provider (aka Distributor or Tenant) The “owner” of some set of Users. See provider concept for a detailed explanation.

Space A virtual folder containing data that can be shared with other TeamDrive users. This is what TeamDrive is all about.

16.2 Abbreviations

PBT **P**rime**B**ase **T**alk

SAKH **S**erver **A**ccess **K**ey **H**TTP for TeamDrive 2.0 Clients

TDNS **T**eam**D**rive **N**ame **S**ervice

TDPS **T**eam**D**rive **P**ersonal **S**erver

TDRS **T**eam**D**rive **R**egistration **S**erver

TDSV Same as **SAKH**, but for TeamDrive 3.0 Clients: **T**eam**D**rive **S**er**v**er