Quick Start Guide
Centralized Device Management (CDM)

This quick start guide is intended to provide setup support in order to start using CDM. CDM is an adjunct platform to the TLS-450PLUS and TLS4 Series platforms supporting remote upgrades, backups and snapshot captures.

What features of CDM do you want to use?

Currently CDM supports upgrades, backups, and snapshot captures as follows:

- **Upgrades:** For console upgrades, an HTTP or HTTPS (secure) web fileshare site is required to store the upgrade packages. The console will retrieve the upgrades from the fileshare.
- **Backups and Snapshots:** Console backups and snapshots require a place to store them (Amazon S3, SFTP or HTTP/HTTPS fileshare). Backups capture the current console setup and console captured data. A snapshot captures the same information and additionally logs that information for Veeder-Root Technical Support to provide assistance with console related matters.

Except for Amazon S3, these platforms could all run on the same machine. For very large or bandwidth constrained organizations, it may be useful to have multiple fileshare machines distributed throughout the network to distribute file access load and avoid potential server network bottlenecks.

Supported Console Software

CDM supports TLS-450PLUS and TLS4 Series console software back to version 6.A. If the network has versions prior to 8.A, care should be taken in entering the Site location data. There are limits in these older versions that produce failures (See Importing Sites and Consoles below for details).

Starting with console version 9.A many new messages were added to the console software to provide more useful error messages.

In order to support backups from the console with CDM, console version 9.R and above is required. As new features are added to CDM, the console software will be enhanced to support those features.

CDM Software

The CDM software installation kit is available for download from the Veeder-Root Software Downloads webpage at https://www.veeder.com/us/software-downloads. Once on this page, select Download CDM. The executable will be downloaded to the Downloads directory on the PC.

Web Server Fileshare

If CDM is being used for a console software upgrade, a Web server (HTTP or HTTPS) can be used to provide the files to the consoles (see vaults below). There are many Web server solutions on the market, including Micrsoft IIS and Apache. Another solution, which is free, is the Abyss server, a lightweight web server with useful features (filesharing, bandwidth control, certificates, etc.). See Aprelium at https://aprelium.com/abyssws/summary.html for more details.

Backup Fileshare

CDM will allow backups to be automatically stored in a remote fileshare (Amazon S3, SFTP, HTTP and HTTPS). SFTP is a very secure method of transferring files encrypted to a fileshare. There are many free implementation (search for “Best free SFTP servers”). Amazon is another very secure method of storing backups, if the organization has an Amazon account.

Console Upgrades

The console software upgrades are available on the Veeder-Root Software Downloads webpage at

https://www.veeder.com/us/software-downloads. Download the software by clicking on the TLS Software Version link. The software is downloaded to your Windows Downloads page directory. Be sure to copy the related Release Information: Release (Number), File Size, and MD5 Checksum. This information is needed to setup a package in CDM.

Environment Requirements

Implementing CDM is not CPU intensive. Organizations sometimes run CDM and filesharing packages on the same hardware platform. It is important to understand the organization's needs to properly size the hardware. Consider how often upgrades and backups are done and any network limitations, both at the station interface as well as at the fileshare interfaces.

Network Usage

CDM can be bandwidth intensive in bursts depending on the network and the amount of traffic on that network. If a station's network is heavily used during the day, CDM can be configured to do its work after hours when there is more bandwidth available. Note that an upgrade file will be between 320 and 350 MB.

The file server side is potentially a bigger bottleneck, where many consoles may be requesting upgrade files simultaneously. Web Server based fileshares (including Abyss) can be configured to throttle file transfer bandwidth usage as well as limit the number of simultaneous server requests.

CDM

CDM runs on Microsoft Windows platforms. The software runs on Windows 7, Windows 10 and Windows Server 2018 platforms. Customers have used laptops, desktops, virtual servers and other Windows-based hardware. This is not a CPU intensive platform. It uses a database which has been optimized for the most common searches.

The consoles reach out to CDM periodically which can be configured from 15 minutes to 24 hours. Most installations are configured to every four hours. This will generate about 5K Bytes of data per day between the console and CDM server.

Upgrade Platform

An HTTP or HTTPS web filesharing environment is needed to provide access to console upgrades. This could be run on the same machine or a separate filesharing platform. Network bandwidth should be considered when using upgrades. This may be less of an issue if upgrades are done less frequently (e.g. every six months).

Backup Fileshare

If the Backup feature is being used, consider how often the backups run and how many consoles are involved. If backups are run daily on 1,000 consoles, the system needs will be different than if backups are run once a month on 100 consoles. We do recommend frequent backups.

Often the Backup Fileshare will be on a separate machine. It's also highly recommended to have processes in place to manage captured backups. Decide how long to keep backups and delete any unneeded backup.

Also, monthly test that your backup procedures are functioning. Can the backup be restored to a console?

Ports

CDM uses two Well Known ports as follows:

- Port 53 is used to resolve domain names (Standard).
- Port 443 is used for web access to CDM and consoles (Standard).

For Upgrades, the following port are used by default and can be changed to meet an organization's requirements:

- Port 3000 is used for console communication.
- Port 3001 is used for file access on a server.

For backups, the following ports are typically used and are typically open in most organizations for the given protocols:

- SFTP is 22
- HTTPS is 443
- HTTP is 80
- Amazon S3 is 443

Registering Consoles

Each console must be registered with CDM before any functionality can be used. Before registering a console with CDM, the site and console information must be configured in CDM.

To register a console, log into the console's web interface. Go to the Registration page (Setup -> Comm > Other > Here > Software Maintenance > Remote Software Download System Registration). The registration process involves the console creating a connection to CDM and identifying itself with a console identifier. The identifier is a unique six-digit code associated with a console in CDM.

Importing Sites and Consoles

When setting up CDM, it can take time to get all the sites and consoles entered. To speed this process, a CSV file can be used to import the data. The spreadsheet should have the following column headers:

- **SiteID:** This is a numeric site ID. The ID can be repeated in rows if there is more than one console per site. This number must be unique throughout CDM, not just per organization.
- **SiteName:** The name used for the site (this is typically descriptive) [20]*.
- **SiteStreet1:** The primary street address [20] *.
- **SiteStreet2:** The second street address, which is often not applicable [20] *.
- **SiteCity:** The city where the site is located [20] *.
- **SiteStateProv:** The state or province where the site is located [2] *.
- **SitePostalCode:** The zip or postal code of the site [10] *.
- **SitePhone:** The phone number to contact the site. A contact name "site contact" is automatically created when this phone number is added during import.
- **DeviceID:** The console ID used to link a console to CDM. Some organizations call this site ID. It is a 6-digit ID for referencing the console. ***This must match the 6-digit ID number from the console's*** Menu > Software Maintenance > Remote SW Download screen. Use leading zeros if the number is less than six digits. In Excel use a single quote (') to force the field to be text and keep the leading zeroes. This number must be unique throughout CDM, not just per organization.
- **DeviceName:** A name used to reference the console. Some use the SiteName as well.

SiteID	SiteName	SiteStreet1	SiteStreet2	SiteCity	SiteStateProv	SitePostalCode	SitePhone	DeviceID	DeviceName
83	Airport	80 Ella Ggrasso Turnpike		Appleton	CT	06096	860-627-8011	008301	Airport TLS-450PLUS
84	SimGas Bridgeport	956 New Britain Ave		Bridgeport	CT	06114	860-321-2234	008401	SimGas 1 TLS-450PLUS
84	SimGas Bridgeport	956 New Britain Ave		Bridgeport	CT	06114	860-321-2234	008402	SimGas 2 TLS-450PLUS
85	Farm Coop Oil	615 MINNIE AVENUE		Wilton	ND	58579	[illegible]	008501	ND TLS-450PLUS

2 Consoles at the same Site, Use the same SiteID

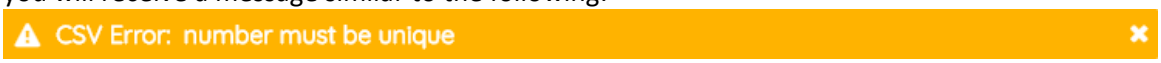
From the spreadsheet, save the data as a ".csv" formatted file. Some organizations use a management system that can generate site/console data and can generate an updated "csv" file.

Once the CSV file is generated it can be imported in CDM. ***We suggest backing up the Documents\Veeder-Root\CDM directory before importing.*** *In the event of problems, stop the CDM software, copy back the previous directory contents and restart CDM.*

Steps to import a CSV file:

1. Select **Organizations** in the menu bar.

2. View the organization associated with the import data.
3. Select the + UPLOAD CSV button.
4. The file explorer selection screen is presented. Select the file you want to import.
5. The import will begin. For 1,000 sites, it takes about 60 seconds. If there are errors in the file, you will receive a message similar to the following:



Users

CDM supports two roles – Admin and User. An Admin can manage everything in the system. There must be at least one Admin present when CDM is initially configured. The difference between the two roles is that only an Admin can:

- Create Organizations.
- Upload Sites and Consoles information for Organizations.
- Add, edit and deactivate users.
- Manage system parameters such as Heartbeat times and License data.
- View the User Audit Trail.

When setting up CDM, decide who should have access to CDM and what role they should have.

Managing Data

This section provides a high-level view of the types of data in CDM.

- **Organizations**: The top-level unit that manages a group of sites. The organization must be defined even if there is only one organization. Multiple organizations can be setup to isolate the management of sites, even if they are all owned by the same larger entity. **One Restriction:** Sites and consoles cannot be moved from one organization to another nor consoles grouped together from different organizations.
- **Vaults:** A vault is a place to store files. This includes Upgrades as well as Backups and Snapshots. The vault describes where the remote filesystem is located and additional required access information. A vault may support access via Amazon S3, SFTP, HTTP and HTTPS.
- **Users:** The people allowed to access Centralized Device Management, their username and password are captured here. The admin role has access to all pages of CDM.
- **Sites:** A site is typically a geographical location where consoles are located (i.e., a station or building). Sites are organized under one organization.
- **Consoles:** The TLS450PLUS or TLS4 Series hardware that is located at a site. Multiple consoles can be associated with a site.
- **Groups:** A grouping of consoles. Consoles are grouped together so that similar actions can be performed on them, regardless of whether they belong to the same site. For flexibility, a console may belong to multiple groups simultaneously.
- **Packages:** A package defines something to be done (e.g. Upgrade, Backup and Snapshot). Along with the vault, the package defines the what and where of work to be done. For an upgrade, it defines what software to use. For a backup or snapshot, it defines what directory to use inside the vault.
- **Plans:** Plans are used to manage the actions done for a set of consoles. Together with a package, the plan defines the consoles the package should work on and when it should be done. For example, when setting up a plan for updates, a specific group will be upgraded with a new package on a given date and time. For backups, a daily backup might be done for a group of consoles.
- **Tasks:** Behind the scenes, tasks are used to manage work being done on a console and to report the progress towards completion. A maximum of one task can be active for a console at any given time.

Users in CDM can add, edit and view information that has been entered in CDM. CDM does support the deletion of data apart from consoles. Consoles and the associated data can be deleted. This provides a historical perspective of the captured data.

CDM does support the concept of deactivation. So, for example, a site, console, package, plan, etc. may be deactivated. Deactivation removes the data from the user's view, but the data is still available in the database. The overview screens provide a Show Inactive checkbox for including deactivated data in a search. All data can then be accessed and re-activated. In addition, deactivation can be used to stop a plan's execution.

Automatic Download and Automatic Activation

The Automatic Download and Automatic Activation functionality is related to upgrades, which the default values are defined in the configuration for an organization. When a console is created, it is assigned the default values for these two functions.

An upgrade is a two-part process:

1. **Download:** From the console, a user can start an upgrade Download. The console will reach-out to CDM to see if there is an upgrade to perform. If there is, the user can kick-off the upgrade process. The console starts the download process by pulling an upgrade package from a fileshare (defined in a vault), installs it, informs CDM when it is complete, and gets the system ready for activation.
2. **Activation:** A user can request an available upgrade that has been downloaded and installed be activated. The console will reboot and switch to the newly installed software. The previous data will be imported into the new environment preserving completely the previous environment in case the user should decide to revert the upgrade.

The Download and Activation can be automated by selecting the respective flags in the console configuration. Most organizations will want to use the Automatic Download because it won't interrupt the actual operations of the console. On the other hand, care should be taken when using Automatic Activation. Certain regions may require that a service person be on site when the console is activated.

Note: *CDM allows full control over when the Automatic Download and Automatic Activation may occur. If a site is shutdown during off peak hours, it may be appropriate to use this functionality to reduce on site costs.*