

***Cleo* VersaLex[®]**

Administrator Guide Addendum



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Cleo

4949 Harrison Avenue, Suite 200
Rockford, IL 61108 USA
Phone: +1.815.654.8110
Fax: +1.815.654.8294
Email: sales@cleo.com
www.cleo.com

Support: 1.815.282.7894, 1.866.444.2536 (US only), 02038653439 (UK), or support@cleo.com

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Using VLAdminc

Use `VLAdminc` to perform top-level VersaLex® administration functions.

You can only run `VLAdminc` through the command line; you cannot run it through VersaLex SYSTEM commands or through **Execute** scripts. You can run `VLAdminc` while the service/daemon is running or in stand-alone mode.

When you first launch `VLAdminc` using any of the commands mentioned in this section, you see messages printed to the console to indicate the startup progress. Note that, for certain Linux environments, when running `VLAdminc` in stand-alone mode, there may be some delays (up to two minutes) while the process is initializing. To avoid these delays, it is recommended to start up the VersaLex daemon prior to launching `VLAdminc`.

VLAdminc syntax

Use the `VLAdminc` command with different sets of flags to work with master keys (Cleo Harmony® only) or authorized roots.

General syntax for working with master keys

Use the following command syntax for `VLAdminc` when working with master keys:

```
VLAdminc -k | --key -q | --quiet  
[-a | --add |  
-c | --change |  
-r | --restore key string}]
```

-k

--key

Indicates that `VLAdminc` will be used for working with master keys.

-q

--quiet

Turns off the confirmation prompts when adding or changing a master key. This flag should be placed between the `-k` and the `-a` | `-c` flags.

-a

--add

Add a master key to encrypt the encryption keys within the JSON key store.

-c

--change

Generate a new master key and change the current master key to the new one. Only functions if the current master key is valid and functional.

-r

--restore

Restore the current master key in the event that it was removed or damaged. Specify the master key to be restored as an argument.

General syntax for working with authorized roots

Use the following command syntax for `VLAdminc` when working with authorized roots:

```
VLAdminc -r | --root -q | --quiet
[-a | --add %name1%=path1 %name2%=path2... |
-c | --change %name1%=path1 %name2%=path2... |
-d | --delete %name1% %name2%... |
-l | --list ]
```



Note: Wildcards or regular expressions are not allowed anywhere within the name-path pairing. If spaces are used anywhere within the pairing, then surround the entire pairing with quotation marks. Within the name portion of the pairing, use special characters with caution, as the names will ultimately be treated like custom directory macro variables within the Cleo Harmony software.

-r

--root

Indicates that `VLAdminc` will be used for working with authorized roots.

-q

--quiet

Turns off the confirmation prompts when adding, changing or deleting a name-path pairing. This flag should be placed between the `-r` and the `-a` | `-c` | `-d` flags.

-a

--add

Adds a name-path pairing to the list of authorized roots. The pairing should be in the form `%name1%=path1`. Also supports adding multiple authorized roots at once by adding a space between the authorized roots.

-c

--change

Changes the path on the name-path pairing. The pairing should be in the form `%name1%=path1`, where `name1` is the name of the path to be changed and `path1` is the new path. Also supports changing multiple authorized roots at once by adding a space between the pairings.

-d

--delete

Deletes the name-path pairing from the list of authorized roots. Should include only the name of the path to be deleted from the list of authorized roots. This also supports deleting multiple authorized roots at once by adding space between their names.

-l

--list

Returns a list of authorized roots.

Working with master keys



Note: All master key operations are only available with Cleo Harmony.

Within VersaLex, all sensitive data (for example, passwords) is encrypted within the XML files. The encryption key associated with this data is stored within a JSON key store in the Cleo Harmony install location (`conf/vlk.json`).

As an extra measure of security, you can optionally add a master key to encrypt the encryptions keys within the JSON store. This master key is only configurable through `VLAdminc`.

For more information about command syntax, see [General command syntax for working with master keys](#).

Creating a master key

To create a master key, use the following command.

```
VLAdminc -k -a
```

When you run this command, `VLAdminc` prints messages like the following to the console:

```
The master key is
"UVVWVDpFRnhJaG5CTlVkdmtERlKxY3oyVEdqelRCRGJOMm9jRUVNcEsvdXZOSUxVPQ==" .
Please record this key and store it in a secure place.
Do you wish to apply this master key now? (Y/N)
```

If you respond `Y` the master key will be created. If you respond `N`, the operation is cancelled and the key is not created. The master key is stored in a JSON key store located in the Harmony install location (`.private/.a`). The name of this store is purposely nondescript to avoid attention.

It is **highly recommended** that you securely backup the `.a` file. If the normal system backup process is not secure, then consider a separate backup mechanism for the master key. If, in the future, the master key needs to be restored, you will need the backup to perform the restoration process.

Changing the master key

This command generates a new master key and changes the current master key to the newly generated one. This command can only be used if the current master key is valid and undamaged. If the current master key is lost, use the `restore` operation instead of the change operation.

To generate a *new* master key use the following command.

```
VLAdminc -k -c
```

When you run this command, `VersaLex` prints messages like the following to the console:

```
The new master key is
"UVVWVDpFRnhJaG5CTlVkdmtERlKxY3oyVEdqelRCRGJOMm9jRUVNcEsvdXZOSUxVPQ==" .
Please record this key and store it in a secure place.
Do you wish to apply this master key now? (Y/N)
```

If you respond `Y` the master key will be changed. If you respond `N`, the operation is cancelled and the key is not changed. The master key is stored in a JSON key store located in the Cleo Harmony install location (`.private/.a`). The name of this store is purposely nondescript to avoid attention.

It is **highly recommended** that you securely backup the `.a` file. If the normal system backup process is not secure, then consider a separate backup mechanism for the master key. If, in the future, the master key needs to be restored, you will need the backup to perform the restoration process.

Restoring the master key

When attempting to start the service/daemon, if you receive the following exception, it indicates the master key has been removed or damaged in some way and needs to be restored:

```
"java.security.KeyStoreException: Master key is missing"
```

To restore the master key, use the following command syntax:

```
VLAdminc -k -r key string
```

where *key string* is the key string for the master key you want to restore.

If the key string you entered is correct, the following message is printed to the console:

```
Master key file has been restored.
```

Alternatively, you can replace the `.private/.a` file with a backup, assuming you have a current backup.

About authorized roots operations from the command line

VersaLex uses a list of authorized roots, a name variable and system path pairing, that define the directories end users will be able to configure and view with their file choosers.

You use the `VLAdminc` command to update the list of authorized roots through add, change, and delete operations. Changes to this list affect hosts (inbox,outbox,sentbox,receivedbox,lcopy archive,certs), local user hosts (root and home directory, keys), local listener (receipts, restart), options (log archive,autorun), translator data (translator location), and route (autoroute).

You can run `VLAdminc` whether the service is running or not. You can disable `VLAdminc` through `SYSTEM` commands or `ExecuteOn`. The list of authorized roots is stored in `Options.xml`.

For more information about command syntax, see [General syntax for working with authorized roots](#)

Adding authorized roots

Add authorized roots to add directories in which the end user can make changes. Use this syntax to add an authorized root:

```
VLAdminc -r -a %name1%=path1
```

where *path1* is the path to the authorized directory and *%name1%* is used to identify the directory.

You can add multiple authorized roots by including a name-path pair for each root in the command syntax. Be sure to separate name-path pairs with a space. For example,

```
VLAdminc -r -a %name1%=path1 %name2%=path2 %name3%=path3
```

When inputting a name-path pair the name can be input as either *name1* or *%name1%*. However names will only be treated and saved as *%name1%*. If a name lacks % signs both preceding and following it then they will be added.

Changing authorized roots

You can change the path of an existing authorized root. Use this syntax:

```
VLAdminc -r -c %name1%=newpath1
```

where *newpath1* is the updated path to the authorized directory and *%name1%* is used to identify the directory.

You can change multiple authorized roots by including a name-path pair for each authorized root in the command syntax. Be sure to separate name-path pairs with a space. For example,

```
VlAdminc -r -a %name1%=newpath1 %name2%=newpath2 %name3%=newpath3
```

When inputting a name-path pair the name can be input as either *name1* or *%name1%*. However names will only be treated and saved as *%name1%*. If a name lacks % signs both preceding and following it then they will be added.

Deleting authorized roots

You can delete existing authorized roots from the list. Use this syntax:

```
VlAdminc -r -d %name1%
```

where *%name1%* is the name of the authorized root you want to delete.

You can delete multiple authorized roots by including multiple root names in the command syntax. Be sure to separate root names with a space. For example,

```
VlAdminc -r -d name1 name2 name3
```

When inputting a name-path pair the name can be input as either *name1* or *%name1%*. However names will only be treated and saved as *%name1%*. If a name lacks % signs both preceding and following it then they will be added.

About path monitoring

Once you have configured at least one authorized root through `VlAdminc`, the Cleo VersaLex software will begin to monitor the paths that are used throughout the system. This monitoring checks paths against not only the authorized roots, but other implied roots as well. The complete set of roots is referred to as the *combined root list*. If any path is encountered that is outside of this combined root list, the user is notified. For example, a common means of notification is that the host/mailbox is marked as `not ready`. The combined root list consists of:

- Cleo VersaLex roots - the directory roots within the Cleo VersaLex install directory that are preconfigured by the software.
- Authorized roots - the directory roots established through `VlAdminc -r (--root)` operations.
- Windows/Unix roots - the directory roots that are established through **VersaLex > Configure > Windows/Unix Folders**.
- AS/400 roots – the directory roots that are established through **VersaLex > Configure > AS/400**.



Note: When configuring an authorized root path, make sure it is not a descendent of another root path (*any* root path - Cleo VersaLex, authorized, Windows/Unix or AS/400), as it could produce unexpected results. For example, these two paths should not be configured: Windows/Unix root: `//filsvr99/public/sam` and authorized root: `//filsvr99/public/sam/subdir`.

Within certain functions of the software, **File Chooser** buttons (i.e., [...], **[Browse...]**, etc.) limit file/directory selection to the complete set of roots. In this case, the **Look in** menu contains a list of all the acceptable root locations for that specific browsing instance. The user can traverse down through any of the roots paths, but can never go above or outside of these paths.

Within other functions of the software, where file/directory selection does not require such restriction, the **Look in** menu contains a more expansive list of roots, including the system roots (e.g., C:, D:), Windows/Unix roots and AS/400 roots. Because the system roots are contained in the list, the possible locations for traversing the file system are more open.

In all cases, if the user uses the **Look in** selections and traverses the tree from there, they are guided to choose an acceptable location for each specific browsing instance. If, however, the user types in a path, outside of the **Look**

in locations, that is not acceptable, they encounter an error – either at the time of selection or later when trying to execute an associated operation.

While the authorized roots, Windows/Unix roots, and AS/400 roots are configured by you, either through `VLAdmin.c` or through Cleo VersaLex, the Cleo VersaLex roots are preconfigured within the product. Below is the list of Cleo VersaLex roots.

- .\inbox
- .\outbox
- .\sentbox
- .\receivedbox
- .\rejectbox
- .\autoroute
- .\autorun
- .\certs
- .\local\root
- .\logs\archive
- .\translators
- .\ AS2\mdn
- .\ AS2\restart
- .\ AS3\mdn
- .\EBICS\ack
- .\ebXML\ack
- .\OFTP\erp
- .\OFTP\restart
- .\RNIF\ack
- .\SMTP\dsn