

VeriMove™

Version 3.8.0

VeriMove™ Installation Guide



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Before You Begin the Windows Installation

Loading the Windows version of VeriMove allows you to use the Windows UI to create job definitions that you can then transfer to your execution platform. The z/OS platform requires the Windows version of VeriMove to install the USPS NCOA^{Link} data. You can use the VeriMove explode.bat file to explode the USPS compressed databases onto a Windows machine and then transfer that data to your z/OS platform.

Windows Requirements

The Windows system requires:

- A supported version of Windows. For a list of supported versions of Windows, see the “Supported Platforms” document at <https://www.pitneybowes.com/us/support.html>.
- 1 GHz processor (2 GHz processor or faster recommended for better performance)
- Appropriate disk capacity for your processing environment. To determine the required disk capacity, multiply the size of the largest file to be processed by at least 2, 3, or 4. Add 30 GB to that total. Each file to be processed must be contained in one logical partition. 10,000 RPM or faster drives are recommended for better performance. Note that the amount of hard disk space required also depends on the type of output required. For example, if you include the input data in the output file, more space is required than if you do not. You will need approximately 20 GB for USPS data. 40 GB (20 GB for production data plus 20 GB for decompressing USPS data updates) is recommended.
- Additional space for databases:

Database	Additional Space Required
Addressing databases (zip4us.dir and city.dir)	Approximately 1.1 GB
Early Warning System (EWS) Option	300 KB
Enhanced Line of Travel (LOT) Option	350 MB
Delivery Point Validation (DPV) Option	1 GB for HASH 1.6 GB for SPLIT 2.3 GB for FLAT
LACS ^{Link} Option	375 MB

Database	Additional Space Required
Suite ^{Link} Option	525 MB

- 2 GB RAM
- Internet Access — The USPS requires all NCOA^{Link} licensees to use the Daily Delete file. The Daily Delete file contains corrections to the currently distributed databases. The Daily Delete file and the NCOA^{Link} data are no longer provided on DVD and are currently provided by Internet download only.
- License for NCOA^{Link}
- User account with administrator rights

Note: VeriMove Access requires Microsoft[®] .Net 4.0 Client Profile or newer. VeriMove installs the .Net 4.0 Client Profile for you as part of the installation process. You can also visit the Microsoft[®] web site to install or upgrade to the Microsoft[®] .Net 4.0 Client Profile.

Installation Steps

Pitney Bowes delivers the VeriMove software as an internet download in a compressed format as a .zip file.

To download and extract your VeriMove software, follow these steps:

1. You will receive an email notification that contains a link to download the VeriMove software for your supported platform(s).
2. Click on the link to access the installation .zip file.
3. Follow the instructions in the FAQ section of the email to download the installation .zip file.
4. Download the installation .zip file.
5. Extract the setup files from the downloaded .zip file.
6. To begin installation, double-click on the setup.exe file located in the temporary folder where you extracted the installation software. Follow the prompts to complete the installation process.
7. If you are upgrading to a new release, VeriMove may require that the JobStats.dat file be in a new format prior to VeriMove processing. If the new release needs to upgrade the Jobstats file, the install process converts the JobStats.dat file into the new format for you.

If this is a new install or you are installing into a new VeriMove directory, no conversion message displays and the product is ready to use after the configuration file has been verified to meet your needs as described in the next step.

8. Edit your configuration file.

Note: The configuration file includes preset values tested for optimum performance across platforms. Changing the preset values may adversely affect your system performance. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing any preset default values.

- a) If you are a new VeriMove user, the installation program installs the config.ini configuration file as part of the normal installation process.
- Enter the appropriate information in the following fields in the config.ini configuration file.
 - For the remaining fields in the config.ini configuration file, Pitney Bowes recommends you use the default values.

For information on all config.ini configuration file fields, see [Configuring Your VeriMove Installation](#) on page 91.

Table 1: Configuration File Field Descriptions

Field	Description						
Registered Company	PAF registered company name.						
Registered User	PAF registered user name.						
NCOA ^{Link} Key	NCOA ^{Link} key assigned to you by Pitney Bowes.						
SerialNumber	Serial number assigned to you by Pitney Bowes.						
NCOA ^{Link} Platform ID	Four-character platform ID assigned by the USPS.						
Licensee	Licensee (Company) name associated with the Platform ID defined above. Appears on reports sent to the USPS.						
NCOA ^{Link} License Type	Type of NCOA ^{Link} license: <table border="0"> <tr> <td>0</td> <td>Full Service Provider</td> </tr> <tr> <td>1</td> <td>Limited Service Provider</td> </tr> <tr> <td>2</td> <td>End User</td> </tr> </table>	0	Full Service Provider	1	Limited Service Provider	2	End User
0	Full Service Provider						
1	Limited Service Provider						
2	End User						

Field	Description
NCOA Use High Memory	<p>Specify whether to use high memory:</p> <ul style="list-style-type: none"> 0 Turn off the large memory model. Use the small memory model. Use this option when only a small amount of limited system memory is available to you. The default value is 0. 1 Turn on the large memory model. A large number of data files are loaded into memory to improve performance. Use this option only if you have enough free system memory available (see notes below). <p>This setting may affect the performance of your system. Setting this to 1, causes a number of database tables to be loaded into memory. The set up of the database takes more time at the beginning of a run but may improve performance if your platform has lots of physical memory.</p> <p>When VeriMove is set to “Large Memory Model” (NCOA Use High Memory=1), DPV, LACS^{Link} and Suite^{Link} are configured to the “L” (Large) memory model. When VeriMove is set to “Small Memory Model” (NCOA Use High Memory=0), DPV, LACS^{Link} and Suite^{Link} are configured to the “U” (Ultra) memory model.</p> <p>Note: When using the large memory model and internal CASS processing, VeriMove uses approximately 1.7 GB of memory. When using the large memory model and external CASS processing, VeriMove uses approximately 1 GB of memory.</p> <p>For HP-UX Unix, if you are running on an Itanium based machine, the large memory model will not work for NCOA^{Link} processing. Set this option to 0.</p>
SmallMemEnh	<p>This feature enhances the small memory model only. To turn on the small memory model, specify configuration variable NCOA Use High Memory = 0. To turn on the small memory model enhancement, you must also specify SmallMemEnh=1. The small memory model enhancement may provide a performance gain when running in small memory model if your list is sorted in ZIP Code order. If your list is sorted in ZIP Code order and there are a large number of records within the same ZIP Code segment (first two digits of the ZIP Code), you can use the small memory model enhancement to load an entire segment into memory and perform memory lookups for each record. This process may improve performance by not performing an I/O lookup on disk for each record.</p> <p>Specify whether to use the small memory model enhancement:</p> <ul style="list-style-type: none"> 0 Do not use the small memory model enhancement. The default value is 0. 1 Use the small memory model enhancement for a potential performance enhancement. <p>Note: To use the small memory model, specify configuration variable NCOA Use High Memory = 0.</p> <p>It is recommended that you sort your list(s) in ZIP Code order even if you are NOT using the small memory model enhancement to achieve optimum performance.</p>

Field	Description
NCOA Use Flat Single	Specify whether to use a single (vs. 26 A-Z) flat file database. 0 Use the 26 flat file A-Z database. 1 Use the single flat file database.
NCOA Use Flat Hash	Specify whether to use the 26 hash files that are used to do a quick test to see if the full data needs to be looked up. The hash files are not strictly necessary for the operation of the flat file database, since a single lookup is done to get all information. Most tests, however, show that using the flat hash files improves performance. 0 Do not use the flat hash files. 1 Use the flat hash files (default value).
ReportPath	Path name for generated report files.
CASSSerialNumber	Pitney Bowes provided CASS serial number if using VeriMove Internal CASS processing.
DPVKey	To perform DPV processing using the VeriMove Internal CASS processor, enter your Pitney Bowes provided DPV product software key.
LACSSKey	To perform LACS ^{Link} processing using the VeriMove internal CASS processor, enter your Pitney Bowes provided LACS ^{Link} product software key.

- b) If you are an existing VeriMove user, the installation program installs the config.ini.distribute configuration file into the installation directory and leaves your original config.ini configuration file intact.

To ensure optimum system performance, compare the config.ini.distribute file configuration options to your current configuration file to determine whether any new options have been added. You can also edit the config.ini.distribute file with your current settings and then replace your current configuration file to have the latest default configuration options.

For detail information on all config.ini configuration file fields, see [Configuring Your VeriMove Installation](#) on page 91.

9. For Windows 2012, to expose VeriMove on the Windows Start screen:
- Click on the down arrow to expose all applications (by name).
 - Navigate to Pitney Bowes, then VeriMove.
 - Right click on VeriMove and select Pin to Start. The VeriMove icon will then appear on the Windows Start screen (typically, on the far right side).

VeriMove Databases

The following table describes the VeriMove databases.

Table 2: Databases, Delivery Methods, and Update Requirements

Database	Delivery Method/Source	Required/Optional	Updates
NCOA ^{Link} Datasets	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees.	Monthly or weekly (depending on license level)
NCOA ^{Link} - Daily Delete File	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees.	Daily
CASS Delivery Point Validation (DPV) LACS ^{Link} Suite ^{Link}	<p>Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account.</p> <p>All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.</p>	<p>VeriMove requires the CASS database for Internal CASS processing.</p> <p>USPS requires DPV, LACS^{Link}, and Suite^{Link} processing to generate a USPS Form 3553.</p>	Monthly
Early Warning System (EWS)	Download from USPS website https://postalpro.usps.com/ . Pitney Bowes sends a monthly update of the EWS File with the CASS database updates.	Optional for all licensees.	Weekly

Installing NCOA^{Link} Data on Windows and z/OS

This section describes how to install NCOA^{Link} data on the Windows and z/OS platforms. The USPS delivers the NCOA^{Link} data files in a compressed or tarred format. As part of the installation process,

you must uncompress/expand the USPS NCOA^{Link} data files using the VeriMove explode process to make the data files fully functional. Prior to installing the NCOA^{Link} data:

- If you are a new customer, you must set up your configuration file prior to attempting to install the NCOA^{Link} data. For more information on setting up your configuration file, see [Installation Steps](#) on page 6.
- If there is more than one physical drive on the system that executes VeriMove jobs, install the NCOA^{Link} data on a separate physical drive from the VeriMove software, operating system, and pagefile/Virtual Memory. This results in a major performance improvement.

Obtaining the NCOA^{Link} Data

Pitney Bowes does not supply the NCOA^{Link} data. You must contact the USPS directly to obtain the NCOA^{Link} data. The USPS requires all licensees to obtain product updates from the USPS Electronic Product Fulfillment (EPF) website.

1. Download the NCOA^{Link} data from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov/>. Note the following additional steps required when downloading the NCOA^{Link} data from the USPS EPF web site:
 - a) Navigate to the location of the downloaded NCOA^{Link} data file.
 - b) The downloaded NCOA^{Link} data from the USPS EPF web site may be in a zipped or tar format. Unzip or untar the data before running the explode process.
 - c) Navigate to the folder that contains the unzipped or untarred NCOA^{Link} data. The number of files in the directory varies depending on the database format you are licensed to use (hash or flat).
2. The following table describes the unzipped/untarred files.

Table 3: NCOA^{Link} Data Files

File Name	Description
clk.zip	Zipped data file that contains necessary NCOA ^{Link} data files.
dvdhdr01.dat dvdhdr02.dat	Files that store the contents of the NCOA ^{Link} database.
rv9.zip	Zipped data file that contains additional NCOA ^{Link} data files.
clk.*	Additional NCOA ^{Link} tables present when you receive 18 month (hash or flat) or 48 month data (hash or flat).

File Name	Description
ank.*	Additional NCOA ^{Link} tables present only when you receive ANK ^{Link} data (hash or flat). Note: After the explode process, these files are renamed to clk.* file names.

- Proceed to the section [Using explode.bat to Explode the NCOALink Files](#) on page 12.

Using explode.bat to Explode the NCOA^{Link} Files

To explode the NCOA^{Link} data files to your database location using explode.bat, follow these steps:

- Browse to the location where you installed VeriMove and go to the Tables subfolder. For example, C:\PB\VeriMove\Tables.
- Edit explode.bat as follows.
 - Omit all quotes from path names. If you leave the INPUTDATAPATH= and NCOADATADESTINATION= values blank, you will be asked for this information in an interactive query mode.
 - Change set INPUTDATAPATH= to the location of the NCOA^{Link} data.
 - Change set NCOADATADESTINATION= to the path where you want to install the NCOA^{Link} data. This folder is automatically created if it does not already exist. For example, if you are installing the data to D:\USPSDATA, specify set NCOADATADESTINATION=D:\USPSDATA.
 - This item only applies if you are exploding the NCOA^{Link} data from a DVD.

The explode.bat script defaults to the values required to explode the NCOA^{Link} data from a location (not from a DVD). To explode from a DVD, change set USEDVDLOAD=N to set USEDVDLOAD=Y.
 - These items only affect Flat File databases and are otherwise ignored.
 - Change Set MVSONLY=N to Y only if you are installing on an MVS platform. This will avoid a preprocessing step that is needed for other platforms.
 - Change Set FLATSINGLE=N to Y if you are using the Single Flat File database.
 - Change Set FLATATOZ=Y to N if you set FLATSINGLE=Y and do not also want to use the 26 Flat File A-Z database.
- Save and close explode.bat under a new name (i.e., myexplode.bat) that will not be overwritten by future updates and installations.
- Run your modified version of explode.bat.
- One of the following messages displays.

- a) If you are exploding from a location, the following messages displays:

NCOALink Database Installation Script.

This script installs an NCOA^{Link} database from a download location onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

- b) If you are exploding from a DVD, the following messages displays:

NCOALink Database Installation Script.

This script installs an NCOA^{Link} database from two DVDs onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

6. The following message displays:

- a) If you are exploding from a location, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found at location src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

- b) If you are exploding from a DVD, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found on DVD src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

The warning above only displays if the destination folder contains data.

7. The explode.bat process continues as follows:

- a) If you are exploding from a DVD, the following messages display:

Insert NCOALink data DVD 1 from the USPS into Drive src

Press any key to continue

Copying DVD 1 (src) to dst DVD 1 copy complete.

Insert NCOA^{Link} data DVD 2 from the USPS into Drive src. Press any key to continue.

Copying DVD 2 (src) to dst DVD 2 copy complete.

- b) If you are exploding from a location, the following messages displays:

Copying from location (src) to dst File copy complete.

8. After the NCOA^{Link} data has been copied, the .zip (zipped) files are automatically expanded. Then, the .szp (USPS-compressed) files are expanded. Afterward, a series of preprocesses and tests are performed. If there are errors, one of the following messages displays:

```
**** FILE NOT FOUND: filename
**** ERROR COPYING FILE: filename
**** ERROR PROCESSING FILE: filename
**** ERROR: message
```

This message is followed by:

FAILURE!!!

Press any key to continue

9. If the message indicates that there is a file in the VeriMove installation folder missing, there was a problem with your NCOA^{Link} data explode process. There may have been a problem copying the NCOA^{Link} data from the source location.

A process called “TestFileSha” produces a file called TablesTestFileSha.log in the parent folder of the folder containing these scripts. This file contains detailed descriptions of the tests performed and any errors that have occurred. If an error occurs, the following message displays:

```
**** ERROR: Verifying Data File Signatures
```

If you get this message, the data files indicated in the log file were corrupted. You may have corrupted NCOA^{Link} data and need to replace the download source (downloaded file or DVD).

10. If there are no problems with the process and tests, the following message displays to indicate that the process completed. You must still check the log file generated during the explode process to ensure the explode process ran error free.

SUCCESS!!!

Press any key to continue

Explode Process Impact on Business Name Matching Tables

VeriMove uses three tables during the Business Name Matching process to compare records in your input file against the NCOA^{Link} data. These three tables, formatted and installed in the Tables directory during VeriMove installation, are only used for Business Name Matching. These tables do not change your input records and do not affect VeriMove output of business names but are simply used to aid in comparing your input records against the NCOA^{Link} data to determine a Business Name match.

Table Name	Description
REDEFINES-WORD-LIST.txt	Maps commonly used abbreviations to full words
JUNK-WORD-LIST.txt	Words that are ignored during Business Name Matching
COMMON-WORD-LIST.txt	Words that are given higher value when calculating Business Name Match percentages (used to determine whether or not a match has been achieved)

Each time you explode the NCOA^{Link} files to your database location, these files are copied from the Tables directory to your database location. Subsequent VeriMove installations overwrite these tables with the tables VeriMove used to certify with the USPS. If you customize these tables, be sure to backup these files before installing a new VeriMove release. After installing a new VeriMove release, replace the installed VeriMove USPS-certified tables with the backup versions of your customized tables.

Note: IMPORTANT! Pitney Bowes certifies VeriMove with the USPS using these three tables. Editing these tables may result in an increase or decrease in your Business Name Matching rate. If your Business Name Matching rate changes significantly, the USPS may audit your Business Name Matching results and require you to recertify using your customized versions of these three tables.

For more information, please refer to the section "Using Business Name Matching" in Chapter 4, Defining a Job in your VeriMove User's Guide.

Installing the Daily Delete File

The USPS require all NCOA^{Link} licensees to use the Daily Delete File. Licensees must download and install this file daily. To install the Daily Delete file, follow these steps.

1. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities.
2. Download the Daily Delete file. The Daily Delete file is available from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov/>. Note the following:
 - You can use the getFileHTTps.exe utility to download the Daily Delete file. However, the getFileHTTps.exe utility:
 - Can only be used to download files from the USPS <https://epf.usps.gov/> secured web site
 - Only downloads the most current version of the USPS file requested
 - Is only available for the Windows platform

For more information on using the getFileHTTPs.exe utility, see Chapter 8, Utilities in your VeriMove User's Guide.

- Windows, Unix, and Linux users should download the ASCII version of the Daily Delete file.
 - z/OS and IBM i users should download the EBCDIC version of the file.
3. If you run VeriMove jobs on Unix, Linux, or a remote Windows system, follow these steps:
 - a) Start an FTP session with your execution platform
 - b) FTP the files in binary mode to a directory that VeriMove can access.

Installing the USPS CASS Databases

The procedure to use to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases depends on whether you are using the VeriMove Internal CASS processor or an External CASS processor such as Finalist or CODE-1 Plus.

Installing Databases for Internal CASS Processing

Internal CASS processing is available on Windows, Unix, and Linux. To install CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases for use with the VeriMove internal CASS processor, follow these steps:

Note: Some databases are very large, require a great deal of time to download, and consume a large amount of disk space. Be sure that you have sufficient space before you begin this process.

1. Download the databases:
 - a) Download the CASS, DPV, LACS^{Link}, or Suite^{Link} databases. Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account. All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.
 - b) Download the EWS data. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities. Use getFileHttp.exe to download the file from <https://postalpro.usps.com/>. For more information, see "Utilities" in your VeriMove User's Guide.
2. Open the .zip file and extract the contents. Or, if the file is an .exe file, double-click on it to extract the contents.
3. If you run VeriMove jobs on a remote Windows system:
 - a) Establish an FTP session with your execution system.

- b) FTP the files in binary mode to a directory that VeriMove can access.

Installing Databases for External CASS Processing

If you are using an external CASS processor such as Finalist or CODE-1 Plus, see that product's documentation for instructions on how to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases.

After you update your CASS product data, follow these steps only if you are using the Manually Registered Statistics option in VeriMove. For information on manually registered statistics, see "Specifying CASS Settings" your VeriMove User's Guide.

1. Launch VeriMove and open a job.
2. Go to the CASS tab.
3. Click the Edit button next to Use Manually Registered Statistics.
4. Update the date to reflect the date of the database(s) you just downloaded. Click OK.

Converting the Statistics File for VeriMove

No changes have been made to the Statistics File for the current release. No conversion is necessary when upgrading from the previous VeriMove release to the current release.

Running a Sample Job from the UI

1. From the VeriMove main menu, choose either to:
 - a) Double-click IVPSampleJobExternalCASSFormat2 (for External CASS processing) or IVPSampleJobInternalCASSFormat2 (for Internal CASS processing).
 - b) Select the job and then choose Job > Edit.
2. Under the General tab:
 - a) Specify the path to your NCOA^{Link} database.
 - b) Specify the path to your Daily Delete database.
3. Under the Files/Reports tab, verify that the paths to the Input file, Output file, and Processing Summary Report file point to your installed location (defaults to C:\PB\VeriMove).
4. If you use External CASS processing, go to **step 6**.
5. If you use Internal CASS processing:
 - a) Under the CASS tab, select Internal CASS processing and specify the path to the City file, ZIP + 4 file, and the location to write the USPS 3553 Report file.

- b) Under the DPV/LACSLink/SuiteLink tab, specify the path to the DPV, LACS^{Link}, and Suite^{Link} databases.
 - c) Click Ok to save your changes and return to the main menu.
6. Click the GO button or right click and select Run from the drop down menu.
 7. When the job completes, the Last Run Status column displays "Completed". If your sample job did not run to successful completion, Last Run Status displays "Failed".
 8. If the sample job failed, please see the event.log for details.
 9. Review your NCOA^{Link} Processing Summary Report for expected results.

Running a Sample Job from the Command Line Using mu.exe

1. From your installed location (defaults to C:\PB\VeriMove), go to the SampleData folder.
2. Open IVPSampleJobExternalCASSFormat2 (for External CASS processing) or IVPSampleJobInternalCASSFormat2 (for Internal CASS processing) in a text editor. Edit the following sample job fields.

Field	Description
NCOADataPath	Path to the NCOA ^{Link} database.
NCOADailyDelete	Path to the Daily Delete database.
InputFilePath	Path to the input file.
OutputFile1Path	Path to the output file.
StatisticsReportFilePath	Path to the location to write the Statistics Report File.
CityFilePath	Internal CASS processing only. Path to the City file.
PrimaryZip4FilePath	Internal CASS processing only. Path to the Primary ZIP + 4 file.
USPS3553ReportFilePath	Internal CASS processing only. Path to the location to write the USPS Form 3553 (CASS Summary Report).
DPVDataFilePath	Internal CASS processing only. Path to the USPS DPV database.
LACSLinkDataLocation	Internal CASS processing only. Path to the USPS LACS ^{Link} database.
SuiteLinkDataLocation	Internal CASS processing only. Path to the USPS Suite ^{Link} database.

3. Open a command window and navigate to your installed VeriMove location.
4. Run VeriMove from the command line using mu.exe and your newly edited sample job def. For example:

```
mu.exe samplejob  
C:\PB\VeriMove\SampleData\IVPSampleJobInternalCASSFormat2.def
```

5. When the job completes, the message "Job Completed" displays.
6. If your sample job did not run to successful completion, an error message indicating the issue displays on the screen and in the event log.
7. Review your NCOA^{Link} Processing Summary Report for expected results.

Running a Sample Job from the Command Line Using FTCmd.exe

1. Follow steps 1-5 in [Running a Sample Job from the UI](#) on page 17.
2. Open a command window and navigate to your installed VeriMove location.
3. Run VeriMove from the command line using FTCmd.exe and the sample job you edited using the UI. For example:

```
FTCmd.exe IVPSampleJobInternalCASSFormat2
```

4. When the job completes, you are returned to the command prompt.
5. If the job did not run to completion, check your event log for information.
6. Review your NCOA^{Link} Processing Summary Report and output for expected results.

Installing Product Updates

To install a VeriMove product update, refer to the readme file that accompanies the product update. The readme file contains pertinent information related to the product update and includes a description of the required steps for installing the product update on your system.

Installing Your Software License Keys

Pitney Bowes distributes new VeriMove software license keys on an annual basis.

Installing Your NCOA^{Link} and Site Support License Keys

To install your NCOA^{Link} and Site Support license keys, follow these steps:

1. Launch the VeriMove GUI screen from the Windows Desktop by selecting Start > Programs > Pitney Bowes > VeriMove > VeriMove.
2. Select Tools > Options > NCOA/Link.
3. Click the Edit button next to the key field that you want to update.
4. Enter your new license key(s) then click OK.
5. Click OK again once you return to the VeriMove GUI screen.

Installing the VeriMoveTM CASSTM Key for Internal CASSTM Processing

To install your VeriMoveTM CASSTM key for Internal CASSTM processing, follow these steps:

1. Launch the VeriMove GUI screen from the Windows Desktop by selecting Start > Programs > Pitney Bowes > VeriMove > VeriMove.
2. Select Tools > Options > NCOA/Link.
3. Click the Edit button next to the CASSTM key field to update.
4. Enter your new CASSTM key for Internal CASSTM processing, then click OK.
5. Click OK again once you return to the VeriMove GUI screen.

Getting Started with VeriMove

For information on getting started with VeriMove, refer to your VeriMove User's Guide.

2 - Installing VeriMove on Unix

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Before You Begin the Unix Installation

This section describes the requirements for processing with VeriMove on a Unix platform.

Unix Requirements

The Unix system requirements are:

- A supported version of Unix. For a list of supported versions of Unix, see the “Supported Platforms” document available at <https://www.pitneybowes.com/us/support.html>.
- 1 GHz processor (2 GHz processor or faster recommended for better performance).
- To determine the required disk capacity, multiply the size of the largest file to be processed by at least 2, 3, or 4. Add 30 GB to that total. Each file to be processed must be contained in one logical partition. 10,000 RPM or faster drives are recommended for better performance. Note that the amount of hard disk space required also depends on the type of output required. For example, if you include the input data in the output file, more space is required than if you do not.

You will need approximately 20 GB for USPS data. 40 GB (20 GB for production data plus 20 GB for decompressing USPS data updates) is recommended.

- Additional space for databases:

Database	Additional Space Required
Addressing databases (zip4us.dir and city.dir)	Approximately 1.1 GB
Early Warning System (EWS) Option	300 KB
Enhanced Line of Travel (LOT) Option	350 MB
Delivery Point Validation (DPV) Option	1 GB for HASH 1.6 GB for SPLIT 2.3 GB for FLAT
LACS ^{Link} Option	375 MB
Suite ^{Link} Option	525 MB

- 2 GB RAM

- Internet Access — The USPS requires all NCOA^{Link} licensees to use the Daily Delete file. The Daily Delete file contains corrections to the currently distributed databases. The Daily Delete file and the NCOA^{Link} data are no longer provided on DVD and are currently provided by Internet download only.
- License for NCOA^{Link}
- User account with administrator rights

Installation Steps

Pitney Bowes delivers VeriMove software for the Unix platform as an internet download.

To install VeriMove on Unix from internet download, follow these steps.

1. You will receive an email notification that contains a link to download the VeriMove software for your supported platform(s).
2. Click on the link to access the installation file.
3. Download the appropriate installation file to Windows.
4. Extract the files.
5. Use an FTP type of program to binary transfer the 'install', 'nlkxyz.taz', and 'vmrls' files from your Windows machine to your desired platform.
6. Run the install script:

```
./install
```

7. Follow the instructions provided in the installation script. The installation script is a conversational package that queries both you and your system for information.
8. If you are upgrading to a new release, VeriMove may require that the JobStats.dat file be in a new format prior to VeriMove processing. If the new release needs to upgrade the Jobstats file, the install process converts the JobStats.dat file into the new format for you and displays messages similar to the following:

```
Converting old statistics file to new format.
statconv - VeriMove Statistics File Conversion Utility
Copyright (C) YYYY, Pitney Bowes Inc.
100% complete.
Statistics conversion completed successfully.
VeriMove install complete.
```

If this is a new install or you are installing into a new VeriMove directory, no conversion message displays and the product is now ready to use after the configuration file has been verified to meet your needs as described in the next step.

9. Edit your configuration file.

Note: The configuration file includes preset values tested for optimum performance across platforms. Changing the preset values may adversely affect your system performance. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing any preset default values.

- a) If you are a new VeriMove user, the installation program installs the config.ini configuration file as part of the normal installation process.
- Enter the appropriate information in the following fields in the config.ini configuration file.
 - For the remaining fields in the config.ini configuration file, Pitney Bowes recommends you use the default values.

For detail information on all config.ini configuration file fields, please see [Configuring Your VeriMove Installation](#) on page 91.

Table 4: Configuration File Field Descriptions

Field	Description
Registered Company	PAF registered company name.
Registered User	PAF registered user name.
NCOA ^{Link} Key	NCOA ^{Link} key assigned to you by Pitney Bowes.
SerialNumber	Serial number assigned to you by Pitney Bowes.
NCOA ^{Link} Platform ID	Four-character platform ID assigned by the USPS.
Licensee	Licensee (Company) name associated with the Platform ID defined above. Appears on reports sent to the USPS.
NCOA ^{Link} License Type	Type of NCOA ^{Link} license: <ul style="list-style-type: none"> 0 Full Service Provider 1 Limited Service Provider 2 End User

Field	Description
NCOA Use High Memory	<p>Specify whether to use high memory using these codes:</p> <ul style="list-style-type: none"> 0 Turns off the large memory model. This is referred to as the small memory model. Use this option when only a small amount of limited real memory is available to you. The default value is 0. 1 Turns on the large memory model. A large number of data files are loaded into memory to improve performance. Use this option only if you have enough free real memory available (see note below). <p>This setting may affect the performance of your system. Setting this to 1, causes a number of database tables to be loaded into memory. The set up of the database takes more time at the beginning of a run but may improve performance if your platform has lots of physical memory.</p> <p>When VeriMove is set to “Large Memory Model” (NCOA Use High Memory=1), DPV, LACS^{Link} and Suite^{Link} are configured to the “L” (Large) memory model. When VeriMove is set to “Small Memory Model” (NCOA Use High Memory=0), DPV, LACS^{Link} and Suite^{Link} are configured to the “U” (Ultra) memory model.</p> <p>Note: When using the large memory model and internal CASS processing, VeriMove uses approximately 1.7 GB of memory. When using the large memory model and external CASS processing, VeriMove uses approximately 1 GB of memory.</p> <p>For HP-UX Unix, if you are running on an Itanium based machine, the large memory model will not work for NCOA^{Link} processing. Set this option to 0.</p>
SmallMemEnh	<p>This feature enhances the small memory model only. To turn on the small memory model, specify configuration variable NCOA Use High Memory = 0. To turn on the small memory model enhancement, you must also specify SmallMemEnh=1. The small memory model enhancement may provide a performance gain when running in small memory model if your list is sorted in ZIP Code order. If your list is sorted in ZIP Code order and there are a large number of records within the same ZIP Code segment (first two digits of the ZIP Code), you can use the small memory model enhancement to have VeriMove load an entire segment into memory and perform memory lookups for each record. This process may improve performance by not performing an I/O lookup on disk for each record.</p> <p>Specify whether to use the small memory model enhancement:</p> <ul style="list-style-type: none"> 0 Do not use the small memory model enhancement. The default value is 0. 1 Use the small memory model enhancement for a potential performance enhancement. <p>Note: To use the small memory model, specify configuration variable NCOA Use High Memory = 0.</p> <p>It is recommended that you sort your list(s) in ZIP Code order even if you are NOT using the small memory model enhancement to achieve optimum performance.</p>

Field	Description
NCOA Use Flat Single	Specify whether to use a single (vs. 26 A-Z) flat file database. 0 Use the 26 flat file A-Z database. 1 Use the single flat file database.
NCOA Use Flat Hash	Specify whether to use the 26 hash files that are used to do a quick test to see if the full data needs to be looked up. The hash files are not strictly necessary for the operation of the flat file database, since a single lookup is done to get all information. Most tests, however, show that using the flat hash files improves performance. 0 Do not use the flat hash files. 1 Use the flat hash files (default value).
ReportPath	Path name for generated report files.
CASSSerialNumber	Pitney Bowes provided CASS serial number if using VeriMove Internal CASS processing.
DPVKey	To perform DPV processing using the VeriMove Internal CASS processor, enter your Pitney Bowes provided DPV product software key.
LACSKey	To perform LACS ^{Link} processing using the VeriMove internal CASS processor, enter your Pitney Bowes provided LACS ^{Link} product software key.

- b) If you are an existing VeriMove user, the installation program installs the config.ini.distribute configuration file into the installation directory leaving your original config.ini configuration file intact.

To ensure optimum system performance, compare the config.ini.distribute file configuration options to your current configuration file to verify if any new options have been made available. You can also edit the config.ini.distribute file with your current settings and then replace your current configuration file to have the latest default configuration options.

For detail information on all config.ini configuration file fields, please see [Configuring Your VeriMove Installation](#) on page 91.

VeriMove Databases

The following table describes the VeriMove databases.

Table 5: Databases, Delivery Methods, and Update Requirements

Database	Delivery Method/Source	Required/Optional	Updates
NCOA ^{Link} Datasets	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees.	Monthly or weekly (depending on license level)
NCOA ^{Link} - Daily Delete File	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees.	Daily
CASS Delivery Point Validation (DPV) LACS ^{Link} Suite ^{Link}	<p>Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account.</p> <p>All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.</p>	<p>VeriMove requires the CASS database for Internal CASS processing.</p> <p>USPS requires DPV^{Link}, LACS^{Link}, and Suite^{Link} processing to generate a USPS Form 3553.</p>	Monthly
Early Warning System (EWS)	Download from USPS website https://postalpro.usps.com/ . Pitney Bowes sends a monthly update of the EWS File with the CASS database updates.	Optional for all licensees.	Weekly

Installing NCOA^{Link} Data

This section describes how to install NCOA^{Link} data on the Unix platform. The USPS delivers the NCOA^{Link} data files in a compressed or tarred format. As part of the installation process, you must

uncompress/expand the USPS NCOA^{Link} data files using the VeriMove explode process to make the data files fully functional. Prior to installing the NCOA^{Link} data:

- If you are a new customer, you must set up your configuration file prior to attempting to install the NCOA^{Link} data. For more information on the configuration file properties, see [Installation Steps](#) on page 24.
- If there is more than one physical drive on the system that executes VeriMove jobs, install the NCOA^{Link} data on a separate physical drive from the VeriMove software, operating system, and pagefile/Virtual Memory. This may result in a major performance improvement.

Obtaining the NCOA^{Link} Data

Pitney Bowes does not supply the NCOA^{Link} data. You must contact the USPS directly to obtain the NCOA^{Link} data. The USPS requires all licensees to obtain product updates from the USPS Electronic Product Fulfillment (EPF) website.

1. Download the NCOA^{Link} data from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov/>. Note the following additional steps required when downloading the NCOA^{Link} data from the USPS EPF web site:
 - a) Navigate to the location of the downloaded NCOA^{Link} data file.
 - b) If necessary, transfer the NCOA^{Link} data file to your Unix system.
 - c) The downloaded NCOA^{Link} data from the USPS EPF site may be in zipped or tar format. Unzip or untar the data before running explode.
 - d) Navigate to the folder that contains the unzipped or untarred NCOA^{Link} data. The number of files in the directory varies depending on the database format you are licensed to use (hash or flat). The following table describes the unzipped/untarred files.
2. The following table describes the unzipped/untarred files.

Table 6: NCOA^{Link} Data Files

File Name	Description
clk.zip	Zipped data file that contains necessary NCOA ^{Link} data files.
dvdhdr01.dat dvdhdr02.dat	Files that store the contents of the NCOA ^{Link} database.
rv9.zip	Zipped data file that contains additional NCOA ^{Link} data files.
clk.*	Additional NCOA ^{Link} tables present when you receive 18 month (hash or flat) or 48 month data (hash or flat).

File Name	Description
ank.*	Additional NCOA ^{Link} tables present only when you receive ANKLink data (hash or flat). Note: After the explode process, these files are renamed to clk.* file names.

- Proceed to the section [Using explode.sh to Explode the NCOALink Files](#) on page 30 .

Using explode.sh to Explode the NCOA^{Link} Files

To explode the NCOA^{Link} files to your database location using explode.sh, follow these steps:

- Browse to the location where you installed VeriMove and go to the Tables subfolder. For example, /PB/VeriMove/nlk/Tables.
- Edit explode.sh as follows.
 - Omit all quotes from path names. If you leave the INPUTDATAPATH= and NCOADATADESTINATION= values blank, you will be asked for this information in an interactive query mode.
 - Change SET INPUTDATAPATH= to the location of the NCOA^{Link} data.
 - Change SET NCOADATADESTINATION= to the path where you want to install the NCOA^{Link} data. This folder is automatically created if it does not already exist. For example, if you are installing the data to /PB/data/USPSDATA, specify SET NCOADATADESTINATION=/PB/data/USPSDATA.
 - This item only applies if you are exploding the NCOA^{Link} data from a DVD.

The explode.sh script defaults to the values required to explode the NCOA^{Link} data from a location (not DVD). To explode from a DVD, change set USEDVDLOAD=N to set USEDVDLOAD=Y.
 - The last three items only affect Flat File databases and are otherwise ignored.
 - Change Set MVSONLY=N to Y only if you are installing on an MVS platform. This will avoid a preprocessing step that is needed for other platforms.
 - Change Set FLATSINGLE=N to Y if you are using the Single Flat File database.
 - Change Set FLATATOZ=Y to N if you set FLATSINGLE=Y and do not also want to use the 26 Flat File A-Z database.
 - In addition, explode.sh includes the following fields for DVD loading:
 - Change exmount="" to the DVD mount command used for your system.
 - Change exunmount="" to the DVD unmount command used for your system.

Examples of different types of mount and unmount commands are located in explode.sh.

3. Save and close explode.sh under a new name (for example, myexplode.sh) that will not be overwritten by future updates and installations.
4. Run your modified version of explode.sh.
5. One of the following messages displays.

- a) If you are exploding from a location, the following messages displays:

NCOALink Database Installation Script.

This script installs an NCOA^{Link} database from a download location onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

- b) If you are exploding from a DVD, the following messages displays:

NCOALink Database Installation Script.

This script installs an NCOA^{Link} database from two DVDs onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

6. The following message displays:

- a) If you are exploding from a location, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found at location src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

- b) If you are exploding from a DVD, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found on DVD src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

The warning above only displays if the destination folder contains data.

7. The explode.sh process continues as follows:

- a) If you are exploding from a location, the following messages display:

Copying from location (src) to dst File copy complete.

- b) If you are exploding from a DVD, the following messages display:

Insert NCOALink data DVD 1 from the USPS into Drive src

Press any key to continue

Copying DVD 1 (src) to dst DVD 1 copy complete.

Insert NCOA^{Link} data DVD 2 from the USPS into Drive src. Press any key to continue.

Copying DVD 2 (src) to dst DVD 2 copy complete.

- After the NCOA^{Link} data has been copied, the .zip (zipped) files are automatically expanded. Then, the .szp (USPS-compressed) files are expanded. Afterward, a series of preprocesses and tests are performed. If there are errors, one of the following messages displays:

```
**** FILE NOT FOUND: filename
**** ERROR COPYING FILE: filename
**** ERROR PROCESSING FILE: filename
**** ERROR: message
```

This message is followed by:

```
FAILURE!!!
Press any key to continue
```

- If the message indicates that there is a file in the VeriMove installation folder missing, there was a problem with your NCOA^{Link} data explode process. There may have been a problem copying the NCOA^{Link} data from the source location.

A process called “TestFileSha” produces a file called TablesTestFileSha.log in the parent folder of the folder containing these scripts. This file contains detailed descriptions of the tests performed and any errors that have occurred. If an error occurs, the following message displays:

```
**** ERROR: Verifying Data File Signatures
```

If you get this message, the data files indicated in the log file were corrupted. You may have corrupted NCOA^{Link} data and need to replace the download source (downloaded file or DVD).

- If there are no problems with these various processes and tests, the following message displays to indicate that the process completed. You must still check the log file generated during the explode process to ensure the explode process ran error free.

```
SUCCESS!!!
Press any key to continue
```

Explode Process Impact on Business Name Matching Tables

VeriMove uses three tables during the Business Name Matching process to compare records in your input file against the NCOA^{Link} data. These three tables, formatted and installed in the Tables directory during VeriMove installation, are only used for Business Name Matching. These tables do not change your input records and do not affect VeriMove output of business names but are simply

used to aid in comparing your input records against the NCOA^{Link} data to determine a Business Name match.

Table Name	Description
REDEFINES-WORD-LIST.txt	Maps commonly used abbreviations to full words
JUNK-WORD-LIST.txt	Words that are ignored during Business Name Matching
COMMON-WORD-LIST.txt	Words that are given higher value when calculating Business Name Match percentages (used to determine whether or not a match has been achieved)

Each time you explode the NCOA^{Link} files to your database location, these files are copied from the Tables directory to your database location. Subsequent VeriMove installations overwrite these tables with the tables VeriMove used to certify with the USPS. If you customize these tables, be sure to backup these files before installing a new VeriMove release. After installing a new VeriMove release, replace the installed VeriMove USPS-certified tables with the backup versions of your customized tables.

Note: IMPORTANT! Pitney Bowes certifies VeriMove with the USPS using these three tables. Editing these tables may result in an increase or decrease in your Business Name Matching rate. If your Business Name Matching rate changes significantly, the USPS may audit your Business Name Matching results and require you to recertify using your customized versions of these three tables.

For more information, please refer to the section "Using Business Name Matching" in Chapter 4, Defining a Job in your VeriMove User's Guide.

Installing the Daily Delete File

USPS regulations require all NCOA^{Link} licensees to use the Daily Delete File. Licensees must download and install this file daily. To install the Daily Delete file, follow these steps.

1. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities.
2. Download the Daily Delete file. The Daily Delete file is available from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov>. Note the following:
 - You can use the getFileHTTPS.exe utility to download the Daily Delete file. However, the getFileHTTPS.exe utility:
 - Can only be used to download files from the USPS <https://epf.usps.gov> secured web site.
 - Only downloads the most current version of the USPS file requested.

- Is only available for the Windows platform.

For more information on using the getFileHTTps.exe utility, see Chapter 8, Utilities in your VeriMove User's Guide.

- Windows, Unix, and Linux users should download the ASCII version of the Daily Delete file.
 - z/OS and IBM i users should download the EBCDIC version of the file.
3. If you run VeriMove jobs on Unix, Linux, or a remote Windows system, follow these steps:
 - a) Start an FTP session with your execution platform.
 - b) FTP the files in binary mode to a directory that VeriMove can access.

Installing the USPS CASS Databases

This section describes the procedure for installing the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases for use with the VeriMove Internal CASS processor or an external CASS processor (such as CODE-1 Plus or Finalist).

Installing Databases for Internal CASS Processing

VeriMove Internal CASS processing is available on Windows, Unix, and Linux platforms. To install CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases for use with VeriMove Internal CASS processing, follow these steps:

Note: Some databases are very large, require a great deal of time to download, and consume a large amount of disk space. Be sure that you have sufficient space before you begin this process.

1. Download the databases:
 - a) Download the CASS, DPV, LACS^{Link}, or Suite^{Link} databases. Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account. All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.
 - b) Download the EWS data. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities. Use getFileHttp.exe to download the file from <https://postalpro.usps.com/>. For more information, see "Utilities" in your VeriMove User's Guide.
2. Open the .zip file and extract the contents. Or, if the file is an .exe file, double-click on the .exe file to extract the contents.

3. If you run VeriMove jobs on a remote Windows system:
 - a) Establish an FTP session with your execution system.
 - b) FTP the files in binary mode to a directory that VeriMove can access.

Installing Databases for External CASS Processing

If you are using an external CASS processor such as Finalist or CODE-1 Plus, see the product documentation for instructions on how to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases.

After you update your CASS product data, follow these steps only if you are using the Manually Registered Statistics option in VeriMove. For information on manually registered statistics, see the section "Specifying CASS Settings" in Chapter 4, Defining a Job in your VeriMove User's Guide.

1. Launch VeriMove and open a job.
2. Go to the CASS tab.
3. Click the Edit button next to Use Manually Registered Statistics.
4. Update the date to reflect the date of the database(s) you just downloaded. Click OK.

Converting the Statistics File for VeriMove

No changes have been made to the Statistics File for the current release. No conversion is necessary when upgrading from the previous VeriMove release to the current release.

Verifying Your Installation

The VeriMove installation includes sample jobs to validate your software and database installation.

Running a Sample Job Using mu

1. From your installed location (default /nlk), go to the nlk/IVP/UNIX folder.
2. Open UnixIVPSampleJobExternalCASSFormat2 (for external CASS Processing) or UnixIVPSampleJobInternalCASSFormat2 (for internal CASS Processing) in a text editor.

Note: Alternately, Unix users can edit the sample job in the VeriMove GUI and then export the sample job to your Unix installation as an XML document.

3. Edit the following sample job fields.

Field	Description
NCOADDataPath	Path to the NCOA ^{Link} database.
NCOADailyDelete	Path to the Daily Delete database
InputFilePath	Path to the input file.
OutputFile1Path	Path to the output file.
StatisticsReportFilePath	Path to the location to write the Statistics Report File.
CityFilePath	Internal CASS processing only. Path to the City file.
PrimaryZip4FilePath	Internal CASS processing only. Path to the Primary ZIP + 4 file.
USPS3553ReportFilePath	Internal CASS processing only. Path to the location to write the USPS Form 3553 (CASS Summary Report).
DPVDataFilePath	Internal CASS processing only. Path to the USPS DPV database.
LACSLinkDataLocation	Internal CASS processing only. Path to the USPS LACS ^{Link} database.
SuiteLinkDataLocation	Internal CASS processing only. Path to the USPS Suite ^{Link} database.

4. Navigate to your installed VeriMove location.
5. Run VeriMove from the command line using mu and your newly edited sample job def.

```
mu samplejob IVP/UNIX/UnixIVPSampleJobInternalCASSFormat2.def
```

6. When the job is complete, the message "Job Completed." displays.
7. If the sample job failed, an error message displays on the screen. Please see the event log for details.
8. Review your NCOA^{Link} Processing Summary Report and output for expected results.

Installing Product Updates

To install a VeriMove product update, refer to the readme file that accompanies the product update. The readme file contains pertinent information related to the product update and includes a description of the required steps for installing the product update on your system.

Installing Software License Keys

Pitney Bowes distributes new VeriMove software license keys on an annual basis.

Installing Your NCOA^{Link} License Key

To install your NCOA^{Link} license key, follow these steps:

1. Navigate to the VeriMoveTM install on your machine.
2. Open and edit the VeriMoveTM configuration file as a text file.
3. Replace the previous NCOA^{Link} key in the "NCOALink Key=" field with your new NCOA^{Link} key.
4. Save the configuration file.

Installing the VeriMoveTM CASSTM Key for Internal CASSTM Processing

To install your VeriMoveTM CASSTM key for Internal CASSTM processing, follow these steps:

1. Navigate to the VeriMoveTM install on your machine.
2. Open and edit the VeriMoveTM configuration file as a text file.
3. Replace the previous NCOA^{Link} key in the "CASSSerialNumber=" field with your new CASSTM key for Internal CASSTM processing,.
4. Save the configuration file.

Getting Started with VeriMove

For information on getting started with VeriMove, refer to your VeriMove User's Guide.

3 - Installing VeriMove on Linux

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Before You Begin the Linux Installation

This section describes the requirements for processing with VeriMove on a Linux platform.

Linux Requirements

The Windows system requirements are:

- A supported version of Linux. For a list of supported versions of Linux, see the “Supported Platforms” document available at <https://www.pitneybowes.com/us/support.html>.
- 1 GHz processor (2 GHz processor or faster recommended for better performance)
- To determine the required disk capacity, multiply the size of the largest file to be processed by at least 2, 3, or 4. Add 30 GB to that total. Each file to be processed must be contained in one logical partition. 10,000 RPM or faster drives are recommended for better performance. Note that the amount of hard disk space required also depends on the type of output required. For example, if you include the input data in the output file, more space is required than if you do not.

You will need approximately 20 GB for USPS data. 40 GB (20 GB for production data plus 20 GB for decompressing USPS data updates) is recommended.

- Additional space for databases:

Database	Additional Space Required
Addressing databases (zip4us.dir and city.dir)	Approximately 1.1 GB
Early Warning System (EWS) Option	300 KB
Enhanced Line of Travel (LOT) Option	350 MB
Delivery Point Validation (DPV) Option	1 GB for HASH 1.6 GB for SPLIT 2.3 GB for FLAT
LACS ^{Link} Option	375 MB
Suite ^{Link} Option	525 MB

- 2 GB RAM

- Internet Access — The USPS requires all NCOA^{Link} licensees to use the Daily Delete file. The Daily Delete file contains corrections to the currently distributed databases. The Daily Delete file and the NCOA^{Link} data are no longer provided on DVD and are currently provided by Internet download only.
- License for NCOA^{Link}
- User account with administrator rights

Installation Steps

Pitney Bowes delivers VeriMove software for the Linux platform as an internet download.

To install VeriMove on Linux from internet download, follow these steps.

1. You will receive an email notification that contains a link to download the VeriMove software for your supported platform(s).
2. Click on the link to access the installation file.
3. Download the appropriate installation file to Windows.
4. Extract the files.
5. Use an FTP type of program to binary transfer the 'install', 'nlkxyz.taz', and 'vmrls' files from your Windows machine to your desired platform.
6. Run the install script:

```
./install
```

7. Follow the instructions provided in the installation script. The installation script is a conversational package that will query both you and your system for information.

If you are upgrading to a new release, VeriMove may require that the JobStats.dat file be in a new format prior to VeriMove processing. If the new release needs to upgrade the Jobstats file, the install process converts the JobStats.dat file into the new format for you and displays messages similar to the following:

```
Converting old statistics file to new format.
statconv - VeriMove Statistics File Conversion Utility
Copyright (C) YYYY, Pitney Bowes Inc.
100% complete.
Statistics conversion completed successfully.
VeriMove install complete.
```

If this is a new install or you are installing into a new VeriMove directory, no conversion message displays and the product is now ready to use after the configuration file has been verified to meet your needs as described in the next step.

8. Edit your configuration file.

Note: The configuration file includes preset values tested for optimum performance across platforms. Changing the preset values may adversely affect your system performance. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing any preset default values.

- a) If you are a new VeriMove user, the installation program installs the config.ini configuration file as part of the normal installation process.
- Enter the appropriate information in the following fields in the config.ini configuration file.
 - For the remaining fields in the config.ini configuration file, Pitney Bowes recommends you use the default values.

For detail information on all config.ini configuration file fields, please see [Configuring Your VeriMove Installation](#) on page 91.

Table 7: Configuration File Field Descriptions

Field	Description
Registered Company	PAF registered company name.
Registered User	PAF registered user name.
NCOA ^{Link} Key	NCOA ^{Link} key assigned to you by Pitney Bowes.
SerialNumber	Serial number assigned to you by Pitney Bowes.
NCOA ^{Link} Platform ID	Four-character platform ID assigned by the USPS.
Licensee	Licensee (Company) name associated with the Platform ID defined above. Appears on reports sent to the USPS.
NCOA ^{Link} License Type	Type of NCOA ^{Link} license: <ul style="list-style-type: none"> 0 Full Service Provider 1 Limited Service Provider 2 End User

Field	Description
NCOA Use High Memory	<p>Specify whether to use high memory using these codes:</p> <ul style="list-style-type: none"> 0 Turns off the large memory model. This is referred to as the small memory model. Use this option when only a small amount of limited real memory is available to you. The default value is 0. 1 Turns on the large memory model. A large number of data files are loaded into memory to improve performance. Use this option only if you have enough free real memory available (see note below). <p>This setting may affect the performance of your system. Setting this to 1, causes a number of database tables to be loaded into memory. The set up of the database takes more time at the beginning of a run but may improve performance if your platform has lots of physical memory.</p> <p>When VeriMove is set to “Large Memory Model” (NCOA Use High Memory=1), DPV, LACS^{Link} and Suite^{Link} are configured to the “L” (Large) memory model. When VeriMove is set to “Small Memory Model” (NCOA Use High Memory=0), DPV, LACS^{Link} and Suite^{Link} are configured to the “U” (Ultra) memory model.</p> <p>Note: When using the large memory model and internal CASS processing, VeriMove uses approximately 1.7 GB of memory. When using the large memory model and external CASS processing, VeriMove uses approximately 1 GB of memory.</p> <p>For HP-UX Unix, if you are running on an Itanium based machine, the large memory model will not work for NCOA^{Link} processing. Set this option to 0.</p> <p>It is recommended that you sort your list(s) in ZIP Code order to achieve optimum performance.</p>

Field	Description
SmallMemEnh	<p>This feature enhances the small memory model only. To turn on the small memory model, specify configuration variable NCOA Use High Memory = 0. To turn on the small memory model enhancement, you must also specify SmallMemEnh=1. The small memory model enhancement may provide a performance gain when running in small memory model if your list is sorted in ZIP Code order. If your list is sorted in ZIP Code order and there are a large number of records within the same ZIP Code segment (first two digits of the ZIP Code), you can use the small memory model enhancement to have VeriMove load an entire segment into memory and perform memory lookups for each record. This process may improve performance by not performing an I/O lookup on disk for each record.</p> <p>Specify whether to use the small memory model enhancement:</p> <ul style="list-style-type: none"> 0 Do not use the small memory model enhancement. The default value is 0. 1 Use the small memory model enhancement for a potential performance enhancement. <p>Note: To use the small memory model, specify configuration variable NCOA Use High Memory = 0.</p> <p>It is recommended that you sort your list(s) in ZIP Code order to achieve optimum performance.</p>
NCOA Use Flat Single	<p>Specify whether to use a single (vs. 26 A-Z) flat file database.</p> <ul style="list-style-type: none"> 0 Use the 26 flat file A-Z database. 1 Use the single flat file database.
NCOA Use Flat Hash	<p>Specify whether to use the 26 hash files that are used to do a quick test to see if the full data needs to be looked up. The hash files are not strictly necessary for the operation of the flat file database, since a single lookup is done to get all information. Most tests, however, show that using the flat hash files improves performance.</p> <ul style="list-style-type: none"> 0 Do not use the flat hash files. 1 Use the flat hash files (default value).
ReportPath	Path name for generated report files.
CASSSerialNumber	Pitney Bowes provided CASS serial number if using VeriMove Internal CASS processing.
DPVKey	To perform DPV processing using the VeriMove Internal CASS processor, enter your Pitney Bowes provided DPV product software key.

Field	Description
LACSKey	To perform LACS ^{Link} processing using the VeriMove internal CASS processor, enter your Pitney Bowes provided LACS ^{Link} product software key.

- b) If you are an existing VeriMove user, the installation program installs the config.ini.distribute configuration file into the installation directory leaving your original config.ini configuration file intact.

To ensure optimum system performance, compare the config.ini.distribute file configuration options to your current configuration file to verify if any new options have been made available. You can also edit the config.ini.distribute file with your current settings and then replace your current configuration file to have the latest default configuration options.

For detail information on all config.ini configuration file fields, please see [Configuring Your VeriMove Installation](#) on page 91.

VeriMove Databases

The following table describes the VeriMove databases.

Table 8: Databases, Delivery Methods, and Update Requirements

Database	Delivery Method/Source	Required/Optional	Updates
NCOA ^{Link} Datasets	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees.	Monthly or weekly (depending on license level)
NCOA ^{Link} - Daily Delete File	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees.	Daily

Database	Delivery Method/Source	Required/Optional	Updates
CASS Delivery Point Validation (DPV) LACS ^{Link} Suite ^{Link}	<p>Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account.</p> <p>All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.</p>	<p>VeriMove requires the CASS database for Internal CASS processing.</p> <p>USPS requires DPV, LACS^{Link}, and Suite^{Link} processing to generate a USPS Form 3553.</p>	Monthly
Early Warning System (EWS)	<p>Download from USPS website https://postalpro.usps.com/. Pitney Bowes sends a monthly update of the EWS File with the CASS database updates.</p>	Optional for all licensees.	Weekly

Installing NCOA^{Link} Data on Linux

This section describes the steps for installing NCOA^{Link} data on the Linux platforms. The USPS delivers the NCOA^{Link} data files in a compressed or tarred format. As part of the installation process, you will need to uncompress/expand the USPS NCOA^{Link} data files using the VeriMove explode process to make the data files fully functional. Prior to installing the NCOA^{Link} data:

- If you are a new customer, you must set up your configuration file prior to attempting to install the NCOA^{Link} data. For more information on the configuration file properties, see [Installation Steps](#) on page 40.
- If there is more than one physical drive on the system that executes VeriMove jobs, install the NCOA^{Link} data on a separate physical drive from the VeriMove software, operating system, and pagefile/Virtual Memory. This may result in a major performance improvement.

Obtaining the NCOA^{Link} Data

Pitney Bowes does not supply the NCOA^{Link} data. You must contact the USPS directly to obtain the NCOA^{Link} data. The USPS requires all licensees to obtain product updates from the USPS Electronic Product Fulfillment (EPF) website.

1. Download the NCOA^{Link} data from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov>. Note the following additional steps required when downloading the NCOA^{Link} data from the USPS EPF web site:
 - a) Navigate to the location of the downloaded NCOA^{Link} data file.
 - b) If necessary, transfer the NCOA^{Link} data file to your Linux system.
 - c) The downloaded NCOA^{Link} data from the USPS EPF site may be in zipped or tar format. Unzip or untar the data before running explode.
 - d) Navigate to the folder that contains the unzipped or untarred NCOA^{Link} data. The number of files in the directory varies depending on the database format you are licensed to use (hash or flat). The following table provides information on the unzipped/untarred files.
2. The following table describes the unzipped/untarred files.

Table 9: NCOA^{Link} Data Files

File Name	Description
clk.zip	Zipped data file that contains necessary NCOA ^{Link} data files.
dvdhdr01.dat dvdhdr02.dat	Files that store the contents of the NCOA ^{Link} database.
rv9.zip	Zipped data file that contains additional NCOA ^{Link} data files.
clk.*	Additional NCOA ^{Link} tables present when you receive 18 month (hash or flat) or 48 month data (hash or flat).
ank.*	Additional NCOA ^{Link} tables present only when you receive ANKLink data (hash or flat). Note: After the explode process, these files are renamed to clk.* file names.

3. Proceed to [Using explode.sh to Explode the NCOALink Files](#) on page 47.

Using explode.sh to Explode the NCOA^{Link} Files

To explode the NCOA^{Link} files to your database location using explode.sh, follow these steps:

1. Browse to the location where you installed VeriMove and go to the Tables subfolder. For example, /PB/VeriMove/nlk/Tables.
2. Edit explode.sh as follows.
 - a) Omit all quotes from path names. If you leave the INPUTDATAPATH= and NCOADATADESTINATION= values blank, you will be asked for this information in an interactive query mode.
 - Change SET INPUTDATAPATH= to the location of the NCOA^{Link} data.
 - Change SET NCOADATADESTINATION= to the path where you want to install the NCOA^{Link} data. This folder is automatically created if it does not already exist. For example, if you are installing the data to /PB/data/USPSDATA, specify SET NCOADATADESTINATION=/PB/data/USPSDATA.
 - b) This item only applies if you are exploding the NCOA^{Link} data from a DVD.

The explode.sh script defaults to the values required to explode the NCOA^{Link} data from a location (not DVD). To explode from a DVD, change set USEDVDLOAD=N to set USEDVDLOAD=Y.
 - c) The last three items only affect Flat File databases and are otherwise ignored.
 - Change Set MVSONLY=N to Y only if you are installing on an MVS platform. This will avoid a preprocessing step that is needed for other platforms.
 - Change Set FLATSINGLE=N to Y if you are using the Single Flat File database.
 - Change Set FLATATOZ=Y to N if you set FLATSINGLE=Y and do not also want to use the 26 Flat File A-Z database.
 - d) In addition, explode.sh includes the following fields for DVD loading:
 - Change exmount="" to the DVD mount command used for your system.
 - Change exunmount="" to the DVD unmount command used for your system.

Examples of different types of mount and unmount commands are located in explode.sh.
3. Save and close explode.sh under a new name (for example, myexplode.sh) that will not be overwritten by future updates and installations.
4. Run your modified version of explode.sh.
5. One of the following messages displays.
 - a) If you are exploding from a location, the following messages displays:

```
*****
```

```
NCOALink Database Installation Script.
```

This script installs an NCOA^{Link} database from a download location onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

- b) If you are exploding from a DVD, the following messages displays:

NCOALink Database Installation Script.

This script installs an NCOA^{Link} database from two DVDs onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

6. The following message displays:

- a) If you are exploding from a location, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found at location src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

- b) If you are exploding from a DVD, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found on DVD src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

The warning above only displays if the destination folder contains data.

7. The explode.sh process continues as follows:

- a) If you are exploding from a location, the following messages display:

Copying from location (src) to dst File copy complete.

- b) If you are exploding from a DVD, the following messages display:

Insert NCOALink data DVD 1 from the USPS into Drive src

Press any key to continue

Copying DVD 1 (src) to dst DVD 1 copy complete.

Insert NCOA^{Link} data DVD 2 from the USPS into Drive src. Press any key to continue.

Copying DVD 2 (src) to dst DVD 2 copy complete.

8. After the NCOA^{Link} data has been copied, the .zip (zipped) files are automatically expanded. Then, the .zfp (USPS-compressed) files are expanded. Afterward, a series of pre-processes and tests are performed. If there are errors, one of the following messages displays:

```
**** FILE NOT FOUND: filename
**** ERROR COPYING FILE: filename
**** ERROR PROCESSING FILE: filename
**** ERROR: message
```

This message is followed by:

```
FAILURE!!!
Press any key to continue
```

9. If the message indicates that there is a file in the VeriMove installation folder missing, there was a problem with your NCOA^{Link} data explode process. There may have been a problem copying the NCOA^{Link} data from the source location.

A process called “TestFileSha” produces a file called TablesTestFileSha.log in the parent folder of the folder containing these scripts. This file contains detailed descriptions of the tests performed and any errors that have occurred. If an error occurs, the following message displays:

```
**** ERROR: Verifying Data File Signatures
```

If you get this message, the data files indicated in the log file were corrupted. You may have corrupted NCOA^{Link} data and need to replace the download source (downloaded file or DVD).

10. If there are no problems with these various processes and tests, the following message displays to indicate that the process completed. You must still check the log file generated during the explode process to ensure the explode process ran error free.

```
SUCCESS!!!
Press any key to continue
```

Explode Process Impact on Business Name Matching Tables

VeriMove uses three tables during the Business Name Matching process to compare records in your input file against the NCOA^{Link} data. These three tables, formatted and installed in the Tables directory during VeriMove installation, are only used for Business Name Matching. These tables do not change your input records and do not affect VeriMove output of business names but are simply used to aid in comparing your input records against the NCOA^{Link} data to determine a Business Name match.

Table Name	Description
REDEFINES-WORD-LIST.txt	Maps commonly used abbreviations to full words
JUNK-WORD-LIST.txt	Words that are ignored during Business Name Matching
COMMON-WORD-LIST.txt	Words that are given higher value when calculating Business Name Match percentages (used to determine whether or not a match has been achieved)

Each time you explode the NCOA^{Link} files to your database location, these files are copied from the Tables directory to your database location. Subsequent VeriMove installations will overwrite these tables with the tables VeriMove used to certify with the USPS. If you customize these tables, be sure to backup these files before installing a new VeriMove release. After installing a new VeriMove release, replace the installed VeriMove USPS-certified tables with the backup versions of your customized tables.

Note: IMPORTANT! Pitney Bowes certifies VeriMove with the USPS using these three tables. Editing these tables may result in an increase or decrease in your Business Name Matching rate. If your Business Name Matching rate changes significantly, the USPS may audit your Business Name Matching results and require you to recertify using your customized versions of these three tables.

For more information, please refer to the section "Using Business Name Matching" in Chapter 4, Defining a Job in your VeriMove User's Guide.

Installing the Daily Delete File

USPS regulations require all NCOA^{Link} licensees to use the Daily Delete File. Licensees must download and install this file daily. To install the Daily Delete file, follow these steps.

1. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities.
2. Download the Daily Delete file. The Daily Delete file is available from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov>. Note the following:
 - You can use the getFileHTTps.exe utility to download the Daily Delete file. However, the getFileHTTps.exe utility:
 - Can only be used to download files from the USPS <https://epf.usps.gov> secured web site.
 - Only downloads the most current version of the USPS file requested.
 - Is only available for the Windows platform.

For more information on using the getFileHTTPs.exe utility, see Chapter 8, Utilities in your VeriMove User's Guide. Note the following:

- Windows, Unix, and Linux users should download the ASCII version of the Daily Delete file.
 - z/OS and IBM i users should download the EBCDIC version of the file.
3. If you run VeriMove jobs on Unix, Linux, or a remote Windows system, follow these steps:
 - a) Start an FTP session with your execution platform
 - b) FTP the files in binary mode to a directory that VeriMove can access.

Installing the USPS CASS Databases

The procedure that you follow to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases depends on whether you are using the VeriMove Internal CASS processor or an external CASS processor such as Finalist or CODE-1 Plus.

Installing Databases for Internal CASS Processing

Internal CASS processing is available on Windows, Unix, and Linux. To install CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases for use with the VeriMove internal CASS processor, follow these steps:

Note: Some databases are very large, require a great deal of time to download, and consume a large amount of disk space. Be sure that you have sufficient space before you begin this process.

1. Download the databases:
 - a) Download the CASS, DPV, LACS^{Link}, or Suite^{Link} databases. Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account. All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.
 - b) Download the EWS data. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities. Use getFileHttp.exe to download the file from <https://postalpro.usps.com/>. For more information, see "Utilities" in your VeriMove User's Guide.
2. Open the .zip file and extract the contents. Or, if the file is an .exe file, double-click on the .exe file to extract the contents.
3. If you run VeriMove jobs on a remote Windows system:
 - a) Establish an FTP session with your execution system.

- b) FTP the files in binary mode to a directory that VeriMove can access.

Installing Databases for External CASS Processing

If you are using an external CASS processor such as Finalist or CODE-1 Plus, see the product documentation for instructions on how to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases.

After you update your CASS product data, follow these steps only if you are using the Manually Registered Statistics option in VeriMove. For information on manually registered statistics, see the section "Specifying CASS Settings" in Chapter 4, Defining a Job in your VeriMove User's Guide.

1. Launch VeriMove and open a job.
2. Go to the CASS tab.
3. Click the Edit button next to Use Manually Registered Statistics.
4. Update the date to reflect the date of the database(s) you just downloaded. Click OK.

Converting the Statistics File for VeriMove

No changes have been made to the Statistics File for the current release. No conversion is necessary when upgrading from the previous VeriMove release to the current release.

Verifying Your Installation

The VeriMove installation includes sample jobs to validate your software and database installation.

Running a Sample Job Using mu

1. From your installed location (default /nlk), go to the nlk/IVP/UNIX folder.
2. Open UnixIVPSampleJobExternalCASSFormat2 (for external CASS Processing) or UnixIVPSampleJobInternalCASSFormat2 (for internal CASS Processing) in a text editor.

Note: Alternately, Linux users can edit the sample job in the VeriMove GUI and then export the sample job to your Linux installation as an XML document.

3. Edit the following sample job fields.

Field	Description
NCOADataPath	Path to the NCOA ^{Link} database.
NCOADailyDelete	Path to the Daily Delete database.
InputFilePath	Path to the input file.
OutputFile1Path	Path to the output file.
StatisticsReportFilePath	Path to the location to write the Statistics Report File.
CityFilePath	Internal CASS processing only. Path to the City file.
PrimaryZip4FilePath	Internal CASS processing only. Path to the Primary ZIP + 4 file.
USPS3553ReportFilePath	Internal CASS processing only. Path to the location to write the USPS Form 3553 (CASS Summary Report).
DPVDataFilePath	Internal CASS processing only. Path to the USPS DPV database.
LACSLinkDataLocation	Internal CASS processing only. Path to the USPS LACS ^{Link} database.
SuiteLinkDataLocation	Internal CASS processing only. Path to the USPS Suite ^{Link} database.

4. Navigate to your installed VeriMove location.
5. Run VeriMove from the command line using mu and your newly edited sample job def.

```
mu samplejob IVP/UNIX/UnixIVPSampleJobInternalCASSFormat2.def
```

6. When the job is complete, the message "Job Completed." displays.
7. If the sample job failed, an error message displays on the screen. Please see the event log for details.
8. Review your NCOA^{Link} Processing Summary Report and output for expected results.

Installing Product Updates

To install a VeriMove product update, refer to the readme file that accompanies the product update. The readme file contains pertinent information related to the product update and includes a description of the required steps for installing the product update on your system.

Installing Your Software License Keys

Pitney Bowes distributes new VeriMove software license keys on an annual basis.

Installing Your NCOA^{Link} License Key

To install your NCOA^{Link} license key, follow these steps:

1. Navigate to the VeriMoveTM install on your machine.
2. Open and edit the VeriMoveTM configuration file as a text file.
3. Replace the previous NCOA^{Link} key in the "NCOALink Key=" field with your new NCOA^{Link} key.
4. Save the configuration file.

Installing the VeriMoveTM CASSTM Key for Internal CASSTM Processing

To install your VeriMoveTM CASSTM key for Internal CASSTM processing, follow these steps:

1. Navigate to the VeriMoveTM install on your machine.
2. Open and edit the VeriMoveTM configuration file as a text file.
3. Replace the previous NCOA^{Link} key in the "CASSSerialNumber=" field with your new CASSTM key for Internal CASSTM processing,.
4. Save the configuration file.

Getting Started with VeriMove

For information on getting started with VeriMove, refer to your VeriMove User's Guide.

4 - Installing VeriMove on z/OS

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Before You Begin the z/OS Installation

The z/OS platform requires the Windows version of VeriMove to install the USPS NCOA^{Link} data. You can use the VeriMove explode.bat file to explode the USPS compressed databases onto a Windows machine and then transfer that data to your z/OS platform. Loading the Windows version of VeriMove also allows you to use the Windows GUI to create job definitions that you can then transfer to your execution platform. For information on installing VeriMove on the Windows platform, see [Installing VeriMove on Windows](#) on page 4.

Note: The UNLOAD.JCL and the IDSINSTL.JCL will delete installed libraries and files before installing new versions. Be sure to back up your SAMPCNFG configuration file before beginning the z/OS installation. Backing up your current SAMPCNFG file can allow you to copy your existing configuration file settings to the new configuration file if you want to use the new installed SAMPCNFG file. If you prefer, you may continue to use your original (pre-install) SAMPCNFG file.

z/OS Requirements

The z/OS system requires:

- A supported version of the IBM z/OS platform. For a list of Pitney Bowes supported versions, see the “Supported Platforms” document at <https://www.pitneybowes.com/us/support.html>.
- 1 GHz processor (2 GHz processor or faster recommended for better performance)
- To determine the required disk capacity, multiply the size of the largest file to be processed by at least 2, 3, or 4. Add 30 GB to that total. Each file to be processed must be contained in one logical partition. 10,000 RPM or faster drives are recommended for better performance. Note that the amount of hard disk space required also depends on the type of output required. For example, if you include the input data in the output file, more space is required than if you do not.

You will need approximately 20 GB for USPS data. 40 GB (20 GB for production data plus 20 GB for decompressing USPS data updates) is recommended.

- 2 GB RAM
- DVD drive (if loading from DVD)
- Internet Access — The USPS requires all NCOA^{Link} licensees to use the Daily Delete file. The Daily Delete file contains corrections to the currently distributed databases. The Daily Delete file and the NCOA^{Link} data are no longer provided on DVD and are currently provided by Internet download only.
- License for NCOA^{Link}
- User account with administrator rights

Installation Steps

Pitney Bowes delivers the VeriMove software as an internet download in a compressed format as a .zip file.

The installation .zip file includes:

- **IDSINSTL JCL** - Used to upload and install your new software release.
- **Installation JCL** - The \$\$READIN member contains an index of all install library members.
- **Object file(s)** - Contains the software (*.OBJ files).
- **Input data file** - Sample records used for installation verification.
- **Other files** - Files that may be pertinent to your release (*.DAT files).

Note: The IDSINSTL JCL member is a complete job that performs all functions required to upload specific product libraries and support files to the mainframe. The job is complete. If your site does not utilize FTP as the preferred file transfer protocol, substitute the FTP step with the utility used at your site and the job will continue to be operational.

To download and extract your VeriMove software, follow these steps:

1. You will receive an email notification that contains a link to download the VeriMove software for your supported platform(s).
2. Click on the link to access the installation .zip file.
3. Follow the instructions in the FAQ section of the email to download the installation .zip file.
4. Download the installation .zip file.
5. Extract the setup files from the downloaded .zip file.
6. Install the Windows version of VeriMove. For instructions, see [Installing VeriMove on Windows](#) on page 4. You must install VeriMove on a Windows computer before installing VeriMove on the z/OS platform.
7. FTP the file IDSINSTL.JCL to a z/OS system. Insert a job card at the beginning of the file. Perform "change all" on the lowercase names shown in the comments at the top of the JCL.

After the files have been uploaded, you will find the following files and partitioned datasets located relative to 'yourhlq.VERIMOVE'.

Table 10: Uploaded File Descriptions

File Name	Description
INSTALIB	JCL used to execute various processes

File Name	Description
LOADLIB	Executables used by the JCL in INSTALIB
OBJLIB	Object files used by the linking process (see next section)
SAMPJOB	Sample job definitions in XML that may be used to test VeriMove
SAMPMANI	Manifest files in XML format used to control the upload of data to the system
SAMPCNFG	Sample configuration file (equivalent to config.ini on Windows)
SAMPDATA	Sample input file (equivalent to SampleData\SampleData.txt on Windows)
SAMPDATA2	Sample input file (equivalent to SampleData\SampleDataFormat2.dat)

8. (Optional) Relink the executables. Before executables in 'yourhlq.VERIMOVE.LOADLIB' can be executed, the executables may need to be relinked for your particular z/OS platform. Edit "yourhlq.VERIMOVE.INSTALIB(LNKBTCH)", inserting a job card at the beginning and doing a "change all" on the lowercase variables as indicated in the comments at the top of the JCL.
9. Edit the configuration file. The configuration file includes preset values tested for optimum performance across platforms. Changing the preset values may adversely affect your system performance. Pitney Bowes recommends you consult with a Pitney Bowes Technical Support Representative or Professional Services Representative before changing any preset default values.
10. If you are an existing VeriMove user:
 - a) The default IDInstall.jcl provided will overwrite your current sampcnfg file if set to the same file qualifier as your current sampcnfg file.
 - b) The default IDInstall.jcl provided will overwrite your current sampcnfg file if set to the same file qualifier as your current sampcnfg file.
 - c) You may change the qualifier in the IDInstall.jcl to write to a new file qualifier to get the latest configuration file or overwrite and reapply your settings.
 - d) If you decided to edit and use the latest configuration file, edit the new configuration file and replace the current one. For a complete discussion of all configuration file fields, please see [Configuring Your VeriMove Installation](#) on page 91.
11. If you are a new VeriMove user, the installation program installs the SAMPCNFG configuration file as part of the normal installation process.
 - a) Enter the appropriate information in the following fields in the SAMPCNFG configuration file.
 - b) For the remaining fields in the SAMPCNFG configuration file, Pitney Bowes recommends you use the default values.

12. For information on all configuration file fields, please see [Configuring Your VeriMove Installation](#) on page 91.

Table 11: Configuration File Field Descriptions

Field	Description
Registered Company	PAF registered company name.
Registered User	PAF registered user name.
NCOA ^{Link} Key	NCOA ^{Link} key assigned to you by Pitney Bowes.
SerialNumber	Serial number assigned to you by Pitney Bowes.
NCOA ^{Link} Platform ID	Four-character platform ID assigned by the USPS.
Licensee	Licensee (Company) name associated with the Platform ID defined above. Appears on reports sent to the USPS.
NCOA ^{Link} License Type	Type of NCOA ^{Link} license: <ul style="list-style-type: none"> 0 Full Service Provider 1 Limited Service Provider 2 End User

Field	Description
NCOA Use High Memory	<p>Specify whether to use high memory using these codes:</p> <ul style="list-style-type: none"> 0 Turns off the large memory model. This is referred to as the small memory model. Use this option when only a small amount of limited real memory is available to you. The default value is 0. 1 Turns on the large memory model. A large number of data files are loaded into memory to improve performance. Use this option only if you have enough free real memory available (see note below). <p>This setting may affect the performance of your system. Setting this to 1, causes a number of database tables to be loaded into memory. The set up of the database takes more time at the beginning of a run but may improve performance if your platform has lots of physical memory.</p> <p>When VeriMove is set to “Large Memory Model” (NCOA Use High Memory=1), DPV, LACS^{Link} and Suite^{Link} are configured to the “L” (Large) memory model. When VeriMove is set to “Small Memory Model” (NCOA Use High Memory=0), DPV, LACS^{Link} and Suite^{Link} are configured to the “U” (Ultra) memory model.</p> <p>Note: When using the large memory model and internal CASS processing, VeriMove uses approximately 1.7 GB of memory. When using the large memory model and external CASS processing, VeriMove uses approximately 1 GB of memory.</p> <p>It is recommended that you sort your list(s) in ZIP Code order to achieve optimum performance.</p>
SmallMemEnh	<p>This feature enhances the small memory model only. To turn on the small memory model, specify configuration variable NCOA Use High Memory = 0. To turn on the small memory model enhancement, you must also specify SmallMemEnh=1. The small memory model enhancement may provide a performance gain when running in small memory model if your list is sorted in ZIP Code order. If your list is sorted in ZIP Code order and there are a large number of records within the same ZIP Code segment (first two digits of the ZIP Code), you can use the small memory model enhancement to have VeriMove load an entire segment into memory and perform memory lookups for each record. This process may improve performance by not performing an I/O lookup on disk for each record.</p> <p>Specify whether to use the small memory model enhancement:</p> <ul style="list-style-type: none"> 0 Do not use the small memory model enhancement. The default value is 0. 1 Use the small memory model enhancement for a potential performance enhancement. <p>Note: To use the small memory model, specify configuration variable NCOA Use High Memory = 0.</p> <p>It is recommended that you sort your list(s) in ZIP Code order to achieve optimum performance.</p>

Field	Description
NCOA Use Flat Single	Specifies whether to use a single (vs. 26 A-Z) flat file database. 0 Use the 26 flat file A-Z database. 1 Use the single flat file database.
NCOA Use Flat Hash	Determines whether to use the 26 hash files that are used to do a quick test to see if the full data needs to be looked up. The hash files are not strictly necessary for the operation of the flat file database, since a single lookup is done to get all information. Most tests, however, show that using the flat hash files improves performance. 0 Do not use the flat hash files. 1 Use the flat hash files (default value).

13. Load your new or updated database file(s). See [VeriMove Databases](#) on page 61.

VeriMove Databases

The following table describes the VeriMove databases.

Table 12: Databases, Delivery Methods, and Update Requirements

Database	Delivery Method/Source	Required/Optional	Updates
NCOA ^{Link} Datasets	Download from USPS website or DVD.	Required for all licensees.	Monthly or weekly (depending on license level)
NCOA ^{Link} - Daily Delete File	Download from USPS website.	Required for all licensees.	Daily

Database	Delivery Method/Source	Required/Optional	Updates
<ul style="list-style-type: none"> • CASS • Delivery Point Validation (DPV) • LACS^{Link} • Suite^{Link} 	<p>Clients who have access to our Software and Data Marketplace portal will be able to download all data product updates there through their account. All other clients will be able to download via our AWS Fulfillment channel. Our Product Distribution team will send an email update with those specific product download links whenever new data product updates become available.</p>	<p>VeriMove requires the CASS database for Internal CASS processing.</p> <p>USPS requires DPV, LACS^{Link}, and Suite^{Link} processing to generate a USPS Form 3553.</p>	Monthly
Early Warning System (EWS)	<p>Download from USPS website https://postalpro.usps.com/. Pitney Bowes sends a monthly update of the EWS File with the CASS database updates.</p>	Optional for all licensees.	Weekly

Installing NCOA^{Link} Data on z/OS

The USPS delivers NCOA^{Link} data files in a compressed or tarred format. As part of the installation process, you will need to uncompress/expand the USPS NCOA^{Link} data files using the VeriMove explode process to make the data files fully functional. Prior to installing the NCOA^{Link} data:

- If you are a new customer, you must set up your configuration file prior to attempting to install the NCOA^{Link} data. For more information on setting up your configuration file, see [Installation Steps](#) on page 57.
- If there is more than one physical drive on the system that executes VeriMove jobs, install the NCOA^{Link} data on a separate physical drive from the VeriMove software, operating system, and pagefile/Virtual Memory. This may result in a major performance improvement.

Obtaining the NCOA^{Link} Data

Pitney Bowes does not supply the NCOA^{Link} data. You must contact the USPS directly to obtain the NCOA^{Link} data. The USPS requires all licensees to obtain product updates from the USPS Electronic Product Fulfillment (EPF) web site.

1. Download the NCOA^{Link} data from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov>. Note the following additional steps required when downloading the NCOA^{Link} data from the USPS EPF web site:

- a) Navigate to the location of the downloaded NCOA^{Link} data file.
- b) The downloaded NCOA^{Link} data from the USPS EPF web site may be in a zipped or tar format. Unzip or untar the data before running the explode process.
- c) Navigate to the folder that contains the unzipped or untarred NCOA^{Link} data. The number of files in the directory will vary depending on the database format you are licensed to use (hash or flat). The following table provides information on the unzipped/untarred files.

Table 13: NCOA^{Link} Data Files

File Name	Description
clk.zip	Zipped data file that contains necessary NCOA ^{Link} data files.
dvdhdr01.dat dvdhdr02.dat	Files that store the contents of the NCOA ^{Link} database.
rv9.zip	Zipped data file that contains additional NCOA ^{Link} data files.
clk.*	Additional NCOA ^{Link} tables present when you receive 18 month (hash or flat) or 48 month data (hash or flat).
ank.*	Additional NCOA ^{Link} tables present only when you receive ANK ^{Link} data (hash or flat).

Note: After the explode process, these files are renamed to clk.* file names.

2. Proceed to [Using explode.bat to Explode the NCOALink Files](#) on page 63.

Using explode.bat to Explode the NCOA^{Link} Files

To explode the NCOA^{Link} data files to your database location using explode.bat, follow these steps:

1. Browse to the location where you installed VeriMove and go to the Tables subfolder. For example, C:\PB\VeriMove\Tables.
2. Edit explode.bat as follows.
 - a) Omit all quotes from path names. If you leave the INPUTDATAPATH= and NCOADATADESTINATION= values blank, you will be asked for this information in an interactive query mode.
 - Change set INPUTDATAPATH= to the location of the NCOA^{Link} data.
 - Change set NCOADATADESTINATION= to the path where you want to install the NCOA^{Link} data. This folder is automatically created if it does not already exist. For example, if you are installing the data to D:\USPSDATA, specify set NCOADATADESTINATION=D:\USPSDATA.

- b) This item only applies if you are exploding the NCOA^{Link} data from a DVD.
The explode.bat script defaults to the values required to explode the NCOA^{Link} data from a location (not from a DVD). To explode from a DVD, change set USEDVDLOAD=N to set USEDVDLOAD=Y.
- c) These three items only affect Flat File databases and are otherwise ignored.
- Change Set MVSONLY=N to Y only if you are installing on an MVS platform. This will avoid a preprocessing step that is needed for other platforms.
 - Change Set FLATSINGLE=N to Y if you are using the Single Flat File database.
 - Change Set FLATATOZ=Y to N if you set FLATSINGLE=Y and do not also want to use the 26 Flat File A-Z database.

3. Save and close explode.bat under a new name (for example, myexplode.bat) that will not be overwritten by future updates and installations.
4. Run your modified version of explode.bat.
5. One of the following messages displays.

- a) If you are exploding from a location, the following messages displays:

```
*****
```

NCOALink Database Installation Script.

```
*****
```

This script installs an NCOA^{Link} database from a download location onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

- b) If you are exploding from a DVD, the following messages displays:

```
*****
```

NCOALink Database Installation Script.

```
*****
```

This script installs an NCOA^{Link} database from two DVDs onto your hard drive. This can require up to 20 GBytes of free space on your hard drive.

6. The following message displays:

- a) If you are exploding from a location, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found at location src

```
***** WARNING -- If you proceed from this point,
all data in folder dst will be erased first. You may type Control-C to abort this process now
without erasing anything. *****
```

- b) If you are exploding from a DVD, the following messages displays:

Folder dst is about to be loaded from the NCOALink database found on DVD src

***** WARNING -- If you proceed from this point, all data in folder dst will be erased first. You may type Control-C to abort this process now without erasing anything. *****

The warning above only displays if the destination folder contains data.

7. The explode.bat process continues as follows:

a) If you are exploding from a DVD, the following messages display:

Insert NCOALink data DVD 1 from the USPS into Drive src

Press any key to continue

Copying DVD 1 (src) to dst DVD 1 copy complete.

Insert NCOA^{Link} data DVD 2 from the USPS into Drive src. Press any key to continue.

Copying DVD 2 (src) to dst DVD 2 copy complete.

b) If you are exploding from a location, the following messages displays:

Copying from location (src) to dst File copy complete.

8. After the NCOA^{Link} data has been copied, the .zip (zipped) files are automatically expanded. Then, the .szp (USPS-compressed) files are expanded. Afterward, a series of preprocesses and tests are performed. If there are errors, one of the following messages displays:

```
**** FILE NOT FOUND: filename
**** ERROR COPYING FILE: filename
**** ERROR PROCESSING FILE: filename
**** ERROR: message
```

This message is followed by:

FAILURE!!!

Press any key to continue

9. If the message indicates that there is a file in the VeriMove installation folder missing, there was a problem with your NCOA^{Link} data explode process. There may have been a problem copying the NCOA^{Link} data from the source location.

A process called "TestFileSha" produces a file called TablesTestFileSha.log in the parent folder of the folder containing these scripts. This file contains detailed descriptions of the tests performed and any errors that have occurred. If an error occurs, the following message displays:

```
**** ERROR: Verifying Data File Signatures
```

If you get this message, the data files indicated in the log file were corrupted. You may have corrupted NCOA^{Link} data and need to replace the download source (downloaded file or DVD).

10. If there are no problems with the process and tests, the following message displays to indicate that the process completed. You must still check the log file generated during the explode process to ensure the explode process ran error free.

SUCCESS!!!

Press any key to continue

Uploading Exploded Files to the z/OS Platform

If you run VeriMove on z/OS, follow these steps to upload exploded files to the z/OS platform:

1. Run UploadServer. Before the USPS database can be uploaded to an MVS system, you must run UploadServer on the PC where the USPS database has been loaded. Go to the folder where VeriMove is installed (for example, C:\PB\VeriMove) and click on "UploadServer.exe". A DOS window will appear indicating that the program is running. Each time a file is uploaded in the steps described in the following sections, the name of the file will be echoed. When you are done uploading, you may close the DOS window to terminate the UploadServer.
2. Edit the Config File. On the MVS system, edit 'yourhlq.VERIMOVE.SAMPCNFG' and do a "change all" on the lowercase variables described at the top of the file.
3. Upload the VeriMove Data. These are files that originally came from the installation of VeriMove on the PC but were copied (by explode.bat) into the same folder as the USPS database. Edit the file 'yourhlq.VERIMOVE.INSTALIB(UPLOAD)' and do a "change all" as described the comments at the top of the file. In particular, set "manifestmember" to 'VERIMOVE'. When you execute this JCL, which only takes a few seconds, several files are uploaded.
4. Upload the USPS Database. The upload of the USPS database requires one of three JCLs depending on the type of database you are uploading.
 - Upload Hash Database — To upload a hash database, edit 'yourhlq.VERIMOVE.INSTALIB(UPLOAD)' as described above, setting "manifestmember" to "USPS" (or "USPSO" for an old style database). The upload may take several hours depending on the speed of your MVS system and your network connection.
 - Upload the Single Flat File database — To upload the Single Flat File database, edit 'yourhlq.VERIMOVE.INSTALIB(UPLOADF)' in the same manner as for UPLOAD of a Hash database but includes additional variables to be replaced. Also, set "manifestmember" to "USPSF" (or "USPSFO" for an old style database).
 - Upload the 26 Flat File A-Z database — To upload the 26 Flat File A-Z database, edit 'yourhlq.VERIMOVE.INSTALIB(UPLOADFZ)' in the same manner as for UPLOAD of a Hash database but includes additional variables to be replaced. Also, set "manifestmember" to "USPSFZ" (or "USPSFZO" for an old style database).
5. For performance evaluation, you may want to upload both the Single Flat File database and the 26 Flat File A-Z databases. Since they are both derived from the same DVD set, it is not necessary to load two completely separate databases.

If you have already used UPLOADF to upload the Single Flat File database, you may use UPLOADFZ to upload the 26 Flat File A-Z database setting "manifestmember" to "USPSFZF".

If you have already used UPLOADFZ to upload the 26 Flat File A-Z database, you may use UPLOADF to upload the Single Flat File database, setting "manifestmember" to "USPSFF".

The USPS database changed in July 31, 2006. The change is transparent to those running on platforms other than MVS. If you are still running an old version of the database, you need to upload using "manifestmember" being set to "USPSO", "USPSFO", and "USPSFZO".

Explode Process Impact on Business Name Matching Tables

VeriMove uses three tables during the Business Name Matching process to compare records in your input file against the NCOA^{Link} data. These three tables, formatted and installed in the Tables directory during VeriMove installation, are only used for Business Name Matching. These tables do not change your input records and do not affect VeriMove output of business names but are simply used to aid in comparing your input records against the NCOA^{Link} data to determine a Business Name match.

Table Name	Description
REDEFINES-WORD-LIST.txt	Maps commonly used abbreviations to full words
JUNK-WORD-LIST.txt	Words that are ignored during Business Name Matching
COMMON-WORD-LIST.txt	Words that are given higher value when calculating Business Name Match percentages (used to determine whether or not a match has been achieved)

Each time you explode the NCOA^{Link} files to your database location, these files are copied from the Tables directory to your database location. Subsequent VeriMove installations will overwrite these tables with the tables VeriMove used to certify with the USPS. If you customize these tables, be sure to backup these files before installing a new VeriMove release. After installing a new VeriMove release, replace the installed VeriMove USPS-certified tables with your backed up versions of your customized tables.

Note: IMPORTANT! Pitney Bowes certifies VeriMove with the USPS using these three tables. Editing these tables may result in an increase or decrease in your Business Name Matching rate. If your Business Name Matching rate changes significantly, the USPS may audit your Business Name Matching results and require you to recertify using your customized versions of these three tables.

For more information, see "Using Business Name Matching" in your VeriMove User's Guide.

Installing the Daily Delete File

USPS regulations require all NCOA^{Link} licensees to use the Daily Delete File. Licensees must download and install this file daily. To install the Daily Delete file, follow these steps.

1. Browse to the location where you installed VeriMove and go to the Utilities subfolder. For example, C:\PB\VeriMove\Utilities.
2. Download the Daily Delete file. The Daily Delete file is available from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov>:
 - You can use the getFileHTTps.exe utility to download the Daily Delete file. However, the getFileHTTps.exe utility:
 - Can only be used to download files from the USPS <https://epf.usps.gov> secured web site.
 - Only downloads the most current version of the USPS file requested.
 - Is only available for the Windows platform.

For more information on using the getFileHTTps.exe utility, see Chapter 8, Utilities in your VeriMove User's Guide. Note the following:

- Windows, Unix, and Linux users should download the ASCII version of the Daily Delete file.
 - z/OS and IBM i users should download the EBCDIC version of the file.
3. If you run VeriMove jobs on Unix, Linux, or a remote Windows system, follow these steps:
 - a) Start an FTP session with your execution platform
 - b) FTP the files in binary mode to a directory that VeriMove can access.
 4. If you run VeriMove on z/OS, follow these steps:
 - a) Modify the UPLOAD JCL included in the yourhlq.VERIMOVE.INSTALIB library from the VeriMove installation media. See the comments in the JCL for the necessary modifications. In particular, set 'manifestmember' to DAILY.
 - b) On the Windows computer, open a command prompt.
 - c) Change to the location where you installed VeriMove. For example, C:\PB\VeriMove.
 - d) Execute UploadServer.exe. Before the database can be uploaded to an MVS system, you must run UploadServer on the PC where the database has been loaded. Go to the folder where VeriMove is installed (for example, C:\PB\VeriMove) and click on "UploadServer.exe". A DOS window appears indicating that the program is running. Each time a file is uploaded in the steps described in the following sections, the name of the file will be echoed. When you are done uploading, you may close the DOS window to kill the UploadServer.
 - e) Execute the UPLOAD job on your z/OS system.

Installing the USPS Databases

The procedure that you follow to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases depends on whether you are using the VeriMove internal CASS processor or an external CASS processor such as Finalist or CODE-1 Plus.

Installing Databases for Internal CASS Processing

Internal CASS processing is only available on Windows, Unix, and Linux.

Installing Databases for External CASS Processing

If you are using an external CASS processor such as Finalist or CODE-1 Plus, see the product documentation for instructions on how to install the CASS, DPV, EWS, LACS^{Link}, and Suite^{Link} databases.

After you update your CASS product data, follow these steps only if you are using the Manually Registered Statistics option in VeriMove. For information on manually registered statistics, see the section "Specifying CASS Settings" in Chapter 4, Defining a Job in your VeriMove User's Guide.

1. Launch VeriMove and open a job.
2. Go to the CASS tab.
3. Click the Edit button next to Use Manually Registered Statistics.
4. Update the date to reflect the date of the database(s) you just downloaded. Click OK.

Converting the Statistics File for VeriMove

No changes have been made to the Statistics File for the current release. No conversion is necessary when upgrading from the previous VeriMove release to the current release.

Verifying Your Installation

The VeriMove installation includes sample jobs to validate your software and database installation.

Running a Sample Job

To verify your installation, follow these steps to run a sample job:

1. Depending on your version of the uploaded USPS database, customize MU (for hash file database), MUF (for single flat file database), or MUFZ (for 26 flat file A-Z database).
2. Verify that you have defined 'yourhlq.VERIMOVE.SAMPCNFG' correctly.
3. If you are using MUF or MUFO, verify that you have set NCOA Use Flat Single=1.
4. If you are using MUFZ or MUFZO, verify that you have set NCOA Use Flat Single=0.
5. Do a global replace of the lowercase variables as described at the top of the file. To run the sample job, you will need to set the following variables as shown.

yourJob—'VERIMOVE.SAMPJOB(IVPXCASS)'

yourInput—'VERIMOVE.SAMPDATA'

yourOutput1—'VERIMOVE.OUTPUT'

yourOutput2—'VERIMOVE.SIDEOUT'

yourSummary—'VERIMOVE.SUMRPT'

6. Execute the JCL.
7. Review your NCOA ^{Link} Processing Summary Report and output for expected results.

Installing Product Updates

To install a VeriMove product update, refer to the readme file that accompanies the product update. The readme file contains pertinent information related to the product update and includes a description of the required steps for installing the product update on your system.

Installing Your Software License Key

Pitney Bowes distributes new VeriMove software license keys on an annual basis.

Installing Your NCOA^{Link} License Key

To install your NCOA^{Link} license key, follow these steps:

1. Navigate to the VeriMove™ install on your machine.
2. Open and edit the VeriMove™ configuration file as a text file.
3. Replace the previous NCOA^{Link} key in the "NCOALink Key=" field with your new NCOA^{Link} key.
4. Save the configuration file.

Getting Started with VeriMove

For information on getting started with VeriMove, refer to your VeriMove User's Guide.

5 - Installing on IBM i

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Before You Begin the IBM i Installation

Before you install VeriMove:

- You must have *SECADM or *SECOFR special authority to perform an installation. However, you do not need to be signed onto the system as QSECOFR.
- You must have your license type (Full, Limited, or End-User), Licensee ID (assigned by USPS), and company name at hand for entering during the installation.

You may be installing the Delivery Point Validation (DPV®), LACS^{Link}®, Suite^{Link}, and Early Warning System (EWS) databases as part of your External CASS™ product installation. USPS® regulations require Delivery Point Validation (DPV) processing, LACS^{Link} processing, and Suite^{Link} processing to generate the USPS Form 3553 (USPS CASS Summary Report). EWS processing is optional for all licensees.

Installation Steps

Pitney Bowes delivers VeriMove software for the IBM i platform as an internet download.

To install VeriMove on IBM i from internet download, follow these steps.

1. Download the ZIP file from the Pitney Bowes web site to your PC.
2. Extract the G1SVINSTL file from the ZIP file.
3. Sign on to the IBM i system with your user profile.

Note: You do not need to be signed onto the system as QSECOFR to perform an installation. However, you must have *SECADM or *SECOFR special authority.

4. On the IBM i command line, type:

```
CRTLIB G1INSTALL
```

5. If G1INSTALL already exists, type:

```
CLRLIB G1INSTALL
```

6. Create a save file for the extracted file:

```
CRTSAVF G1INSTALL/G1SVINSTL
```

7. From the PC where you downloaded the ZIP file, FTP the extracted G1SVINSTL file to the corresponding save file that you just created. Be sure to transfer the file in binary mode.
8. At the IBM i command line, type:

```
RSTOBJ OBJ(*ALL) SAVLIB(QTEMP) DEV(*SAVF) SAVF(G1INSTALL/G1SVINSTL)
```

Or, if you prefer to prompt (F4) the RSTOBJ command, enter the appropriate information on the Restore Object screen.

9. When the command completes, the following message displays:

```
n objects restored from QTEMP to QTEMP
```

...where n is a varying number.

10. To start the install program, type:

```
CALL G1UI
```

Product Selection

1. The install source is scanned for products to install. The Product Selection screen (G1INST200) displays.

```

hh:mm:ss          Pitney Bowes - Application Installation          G1UI
mm/dd/yyyy                Product Selection                      G1INST200

Select the products you wish to install and press F6 to continue:
 1=Select

 1 *PRD @@ G1SV@@PGM  PB Software Global Library
 1 *PRD NL G1SVNLPGM  VeriMove
 1 *HLP @@ G1SV@@HLP  Global Library Help Text Folder

                                                                    Bottom

-----
F3/12=Exit  F6=Continue

```

2. To prevent an item from being installed, remove the "1" next to the item as shown above.

3. Press F6 to continue with the installation.

Global Library Options

1. If you select the “PB Software Global Library,” the Global Library Special Options screen (G1INST300) displays.

```

hh:mm:ss          Pitney Bowes - Application Installation          G1UI
mm/dd/yyyy          Global Library Special Options                G1INST300

These steps are part of the Global Function library installation.

Select steps to be performed, press F6.
 1=Select

1 Create GROUP1USER user profile
1 Change initial program to G1MM00 for GROUP1USER
1 Add GROUP1USER to System Distribution Directory

F3/12=Exit  F6=Continue

```

2. To prevent a step from being performed, remove the “1” next to the step.
3. Press F6 to continue.

Product Installation Options

1. The Product Installation screen (G1INST400) displays for each product you selected on the Product Selection screen (G1INST200). If the “Install to library” already exists, the “Backup library name” field displays as shown in the example below. The library name is automatically generated as “G1yymmddnn,” where yymmdd is the current date, and nn is a sequential number.

Note: Keep track of your backup library name in case you want to restore your original library.

```

hh:mm:ss          Pitney Bowes - Application Installation      G1UI
mm/dd/yyyy          Product Installation                      G1INST400

Installation details:

Installing from . . . *SAVF

Product ID/Desc . . . @@ / Global Library
Version on Media. . . NN.N

Enter product installation parameters, press F6.

Global library. . . . VM@@370I02
Install to library. . G1@@PGMS  * Same version already installed!
Backup library name . G115051301
Install IVP job?. . . Y          Y,N

-----
F3=Exit  F6=Continue

```

Note: If a warning in yellow appears on this screen, you must view the warning before you are allowed to proceed to the next screen. If an error in red appears on this screen, you must resolve the error condition before you are allowed to proceed.

2. To install the product, press **F6**.
3. If the Locked Library screen (G1INST401) displays, continue to [Locked Libraries](#) on page 76.
4. After installing the product, the Product Installation screen (G1INST400) displays for each remaining product.
5. Proceed to [Completing the Installation](#) on page 77.

Locked Libraries

Follow the steps below to resolve a “Locked Libraries” condition.

1. If you are overlaying an existing installation, the library is checked for locks before installation begins. If locks are found, the Locked Library screen (G1INST401) displays.
2. You must clear the locks before you can continue the installation. Use a second session to run the command shown on the screen to determine which jobs are locking the library.
3. After releasing the locks, return to this session and press **F6** to continue.

Completing the Installation

Follow these steps to complete your installation.

1. After completing the VeriMove installation, the Edit CONFIG screen (G1INST999) displays.
2. Enter the appropriate CONFIG file information on the Edit CONFIG screen. This information is stored in the CONFIG file. For more information on the configuration file, see [Configuring Your VeriMove Installation](#) on page 92.

```

Pitney Bowes - Application Installation
Edit CONFIG
GINLEDTCFG
NLKCFG

Enter values for CONFIG file, press Enter:
NCOA Logging . . . . .
NCOA Platform ID . . . . . CGVM
NCOA License Type . . . . . 0 0=Full, 1=Limited, 2=End User
NCOALink Key . . . . . XXXX-XXXX-XXXX-XXXX XXXX-XXXX-XXXX-XXXX
Licensee . . PITNEY BOWES

Small Memory Model Enhancement .. . . . . 0 0=Off, 1=On
Use High Memory? . . . . . N Y
Business Name Matching Enhancements? . . . . . 1 0=Off, 1=On

Interval: Move . . . . . 2 2      Interval: Input . . . . . 6 6
Interval: NCOA . . . . . 2 2      Interval: Output . . . . . 8 8

Queue Size: Move          5000 5000  Queue Size: Input          3000 3000
Queue Size: Job Input     3000 3000  Queue Size: NCOA . . . . . 4000 4000
Queue Size: Output . . . 3000 3000  NCOALink Queue . . . . . 3000 3000

Bottom

F3/F12=Cancel  F6=Save

```

Field	Description
NCOA Logging	Turn the NCOA Logging feature on or off.
NCOA Platform ID	Four-character platform ID assigned by the USPS.
NCOA License Type	Type of NCOA ^{Link} license: <ul style="list-style-type: none"> 0 Full Service Provider 1 Limited Service Provider 2 End User
NCOA ^{Link} Key	NCOA ^{Link} key assigned to you by Pitney Bowes.

Field	Description
Licensee	Licensee (Company) name associated with the Platform ID defined above. Appears on reports sent to the USPS.

3. You can use the default values for the remaining fields.
4. Press F6 to save your changes and exit the install program.
5. The Installation Complete screen displays.

```

hh:mm:ss          Pitney Bowes - Application Installation      G1UI
mm/dd/yyyy          Installation Complete                    G1INST999

Installation of your products has completed.

Please print and save the G1UILOG spoolfile.

If any products were replaced during this installation, a backup copy has
been made. Review the G1UILOG spoolfile for those library names and other
details about this installation. The backup libraries should be saved and
deleted after you have completed testing the new version.

If you require further assistance, please contact:
Technical Services
1-800-367-6950

-----
Enter=Exit

```

6. Review the G1UILOG spoolfile. The G1UILOG is a log of steps taken by the install program.
7. You have successfully installed your VeriMove software and are ready to load the databases. Go to [Installing USPS Data](#) on page 79.

Installing USPS Data

The following table summarizes the VeriMove database requirements for the IBM i platform.

Table 14: VeriMove Databases, Delivery Methods and Update Requirements

Database	Delivery Method/Source	Required/Optional	Updates
NCOA ^{Link} Datasets	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees	Monthly or weekly (depending on license level)
NCOA ^{Link} Daily Deletes	Download from the USPS Electronic Product Fulfillment (EPF) web site at https://epf.usps.gov/ .	Required for all licensees	Daily

Installing the NCOA^{Link} Database

This section describes the steps for installing NCOA^{Link} data on the IBM i platform. The USPS delivers the NCOA^{Link} data files in a compressed or tarred format. As part of the installation process, you will need to uncompress/expand the USPS NCOA^{Link} data files using the VeriMove explode process to make the data files fully functional.

Obtaining the NCOA^{Link} Data

Pitney Bowes does not supply the NCOA^{Link} data. You must contact the USPS directly to obtain the NCOA^{Link} data. The USPS requires all licensees to obtain product updates from the USPS Electronic Product Fulfillment (EPF) website.

1. Download the NCOA^{Link} data from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov/>. Note the following additional steps required when downloading the NCOA^{Link} data from the USPS EPF web site:
 - a) Navigate to the location of the downloaded NCOA^{Link} data file.
 - b) If necessary, transfer the NCOA^{Link} data file to your IBM i system.

- c) The downloaded NCOA^{Link} data from the USPS EPF site may be in zipped or tar format. Unzip or untar the data before running explode.
2. Navigate to the folder that contains the unzipped or untarred NCOA^{Link} data. The number of files in the directory will vary depending on the database format you are licensed to use (hash or flat). The following table provides information on the unzipped/untarred files.

Table 15: NCOA^{Link} Data Files

File Name	Description
clk.zip	Zipped data file that contains necessary NCOA ^{Link} data files.
dvdhdr01.dat dvdhdr02.dat	Files that store the contents of the NCOA ^{Link} database.
rv9.zip	Zipped data file that contains additional NCOA ^{Link} data files.
clk.*	Additional NCOA ^{Link} tables present when you receive 18 month (hash or flat) or 48 month data (hash or flat).
ank.*	Additional NCOA ^{Link} tables present only when you receive ANK ^{Link} data (hash or flat).

Note: After the explode process, these files are renamed to clk.* file names.

Installing the NCOA^{Link} Database

The Explode process uses an Internet downloaded database file to produce a ready-to-use native database library. To install the NCOA^{Link} database, follow these steps.

1. Start VeriMove on your IBM i machine.
2. From the Work With Jobs screen, press **F20**. The Database Functions screen (NLCPDB01) displays.

```

hh:mm:ss                VeriMove                NLCPEX00
mm/dd/yyyy              Replace with screen heading desired  NLCPEX02
                        Database Functions                RNN.NNNN

Select one of the following:

    2. Load Daily Delete file from IFS
    4. Install DB from Internet download
    6. Change default Database Library

Option

-----
F3=Exit

```

3. To install from an Internet downloaded file, select 4. Install DB from Internet Download. The IFS Installation Screen (NLCPEX02) displays.

```

hh:mm:ss                VeriMove                NLCPEX00
mm/dd/yyyy              Replace with screen heading desired  NLCPEX02
                        Explode Database Loader            RNN.NNNN

Specify installation parameters, press F6:

Note: Installation of an NCOALink database may require up to 20GB of
free space on your system.

Target DB Library Name . . . .
IFS Folder with Downloaded DB

Turbo Mode . . . . . Y, N
Turbo mode selects the defaults for you.

Target DB Library must not exist.

-----
F3=Exit  F6=Continue                F12=Skip

```

4. Complete the following fields.

Field	Description
Target DB Library Name	Enter the target database library name.

Field	Description
IFS Folder with Downloaded DB	Enter the name of the folder in which you downloaded the database.
Turbo Mode	Indicate whether to use the database explode process default values. Y — Use the database explode process default values. N — Do not use the database explode process default values.

5. Press F6 to continue. The Explode Database Loader — Copying Files screen displays.

```

hh:mm:ss                               VeriMove                               CPEX00
mm/dd/yyyy                             Replace with screen heading desired    NLCP EX25
                                         Explode Database Loader                R1s NN.N

Specify installation parameters, press F6:

Various data files are about to be copied between the temporary IFS folder:
  /VeriMoveDB LoadTemp
And the native library:
  NLDB

When ready, press F6 to continue.

-----
F3=Exit  F6=Continue                               F12=Skip

```

6. Press F6 to begin copying the data files. After the files are copied to the temporary IFS folder, the Explode Database Loader — Unzipping Files screen displays.

```

hh:mm:ss                               VeriMove                               NLCP EX00
mm/dd/yyyy                             Replace with screen heading desired    NLCP EX30
                                          Explode Database Loader                 R1s NN.N

Specify installation parameters, press F6:

About to Unzip files in the temporary IFS folder:
/VeriMoveDBLoadTemp

Press F6 to continue.

-----
F3=Skip  F6=Continue                               F12=Skip

```

- Press F6 to unzip the files in the temporary IFS folder:

```
/VeriMoveDBLoadTemp
```

- After unzipping the files, press F6 to continue. The Explode Database Loader — Expanding Files screen displays.

```

hh:mm:ss                               VeriMove                               CPEX00
mm/dd/yyyy                             Replace with screen heading desired    NLCP EX32
                                          Explode Database Loader                 R1s NN.N

Specify installation parameters, press F6:

SZP files are about to be expanded in the temporary IFS folder:
/VeriMoveDBLoadTemp
If SZP files exist, this may be a long-running process.

When ready, press F6 to continue.

-----
F3=Skip  F6=Continue                               F12=Skip

```

9. Press F6 to expand the SZP files into the /VeriMoveDBLoadTemp folder. This process may take additional time. After the files have been expanded into the /VeriMoveDBLoadTemp folder, the Explode Database Loader — Converting File Format screen displays.

```

hh:mm:ss                               VeriMove                               CPEX00
mm/dd/yyyy                             Replace with screen heading desired      NLCP EX34
                                           Explode Database Loader                    R1s NN.N

Specify installation parameters, press F6:

These files are about to be converted to PB format in the temporary IFS folder:
/VeriMoveDBLoadTemp

crd.dat
dsc.dat
lln.dat
nam.dat
pro.dat
sno.dat
suf.dat

When ready, press F6 to continue.

-----
F3=Skip  F6=Continue                               F12=Skip

```

10. Press F6 to begin the process of converting the expanded files to the VeriMove format. After converting the files, the Explode Database Loader — Verifying File Signatures screen displays.

```

hh:mm:ss                               VeriMove                               CPEX00
mm/dd/yyyy                             Replace with screen heading desired      NLCP EX36
                                           Explode Database Loader                    R1s NN.N

Specify installation parameters, press F6:

Data file signatures are about to be verified

This is a long-running process.

When ready, press F6 to continue.

-----
F3=Skip  F6=Continue                               F12=Skip

```

11. Press F6 to verify the data file signatures. This process may take additional time.

12. If the system detects a Flat File database, the Explode Database Loader — Specifying Flat File Format screen displays.

```

hh:mm:ss                VeriMove                NLCP EX00
mm/dd/yyyy              Replace with screen heading desired  NLCP EX50
                        Explode Database Loader              R1s NN.N

Specify installation parameters, press F6:

Flat File Database Detected:

Create A-Z flat file DB? . . . Y  Y, N

-----
F3=Skip  F6=Continue                                     F12=Skip

```

13. Specify your flat file format:

- a) To create the 26 flat file A-Z database, enter Y.
- b) If you do not want to create the 26 flat file A-Z database, enter N.

14. After specifying your flat file format, press **F6** to continue. The Explode Database Loader — File Transfer screen displays.

```

hh:mm:ss                VeriMove                CPEX00
mm/dd/yyyy              Replace with screen heading desired  NLCP EX60
                        Explode Database Loader              R1s NN.N

Specify installation parameters, press F6:

About to copy files from the temporary IFS folder:
/VeriMoveDBLoadTemp
To the native library:
  NLDB

When ready, press F6 to continue.

-----
F3=Skip  F6=Continue                                     F12=Skip

```

15. Press F6 to transfer the temporary IFS files into the native database files. After transferring the files, the Explode Database Loader — Deleting Temporary Folder screen displays.

```

hh:mm:ss                VeriMove                CPEX00
mm/dd/yyyy              Replace with screen heading desired  NLCP EX99
                        Explode Database Loader              R1s NN.N

Specify installation parameters, press F6:

You may now delete the temporary IFS folder:
  /VeriMoveDBLoadTemp

Ready to cleanup other installation artifacts.
When ready, press F6 to continue.

-----
F3=Skip  F6=Continue                                F12=Skip

```

16. Press F6 to delete the temporary folder. After deleting the temporary folder, the native database library is ready for use.

Installing the Daily Delete File

USPS regulations require all NCOALink licensees to use the Daily Delete File. Licensees must download and install this file daily. To install the Daily Delete file, follow these steps.

1. Create a folder on the IFS. Name the folder whatever you like.
2. Download the Daily Delete file. The Daily Delete file is available from the USPS Electronic Product Fulfillment (EPF) web site at <https://epf.usps.gov/>. IBM i users should download the EBCDIC version of the file. Save the file to the IFS folder that you created.
3. Log on to your system.
4. Start VeriMove using your usual method, such as by using the "G1" command and selecting option 12 for VeriMove.
5. From the Work with Jobs screen, press F20=Database Functions.
6. Select option 2: "Load Daily Delete file from IFS."
7. On screen NLCPDB01, fill in the "Source IFS folder" field with the IFS folder name that you created.
8. Fill in the "Target library" field with the system library name where you would like the native Daily Delete file to be created.

9. Press F6 and the Daily Delete file will be installed.

Configuring Your Job to Use the Daily Delete File

There are two options you can choose from to configure your job to use the Daily Delete file:

1. Set up a default Daily Delete file location.
2. Specify the Daily Delete file location at job submission time.

Setting Up a Default Daily Delete File Location

One option you can use to configure your job to use the Daily Delete file is to set up a default Daily Delete file location:

1. From the Work with Jobs screen, press F20=Database Functions.
2. Select option 8: "Change default Database Library."
3. On screen NLCPDB90, enter the location of the Daily Delete file.
4. Returning to the Work with Jobs screen, select option 16=Submit next to the job you wish to submit.
5. On screen NLCPDB01, specify the value *DEFAULT for the Daily Delete file. Leave the Library and Member names blank.
6. Press F6=Submit.
7. The job will use the values on NLCPDB90 for future job submissions.

Specifying the Daily Delete File Location at Job Submission

You can specify the Daily Delete file location at job submission time:

1. From the Work with Jobs screen, select option 16=Submit next to the job you wish to submit.
2. On screen NLCPDB01, specify the location of the Daily Delete file.
3. Press F6=Submit.
4. The job will use those specific values for future job submissions.

Installing a Product Update

To install a VeriMove product update:

1. Download the product update file from the Product Updates page of the web site. The downloaded file will either be a self-extracting zip file with a *.exe extension, or a regular *.zip file that should be unzipped.

2. If you download the *.zip file, unzip this file with a standard unzipping utility to extract the contents of the update. If you downloaded a self-extracting *.EXE, double-click the *.EXE file on a Windows-based machine to extract the contents of the file.

One of the extracted files will be an IBM i save file with an *.SVF extension. This file is the actual Product Update and must be on a PC that has file transfer capabilities (such as FTP) to your IBM® i system.

Note: If there are two files with an *.SVF extension, then this patch includes code for both the global library and the product library. You must follow additional instructions to install both sets of code. These instructions are contained in NOTES accompanying each affected step.

3. On the IBM i platform, create a save file in your own library. This is the location that will hold the file after it is transferred from the PC. For example:

```
CRTSAVF FILE(YourLib/YourSaveFileName)
```

Note: Create two save files in your own library. This is the location that will hold the files after they are transferred from the PC. For example:

```
CRTSAVF FILE(YourLib/SAVF@@)
CRTSAVF FILE(YourLib/SAVFNL)
```

4. Transfer the *.SVF file from the PC to the IBM i save file created in the previous step. Transfer the file using FTP in binary mode.

Note: Transfer the *.SVF files from the PC to the IBM i save files created in the previous step. Transfer the files using FTP in binary mode. The name of one of the *.SVF files will end in "@@" This is the patch for the global library: FTP it into your Lib/SAVF@@. The other *.SVF file will end in the product code. FTP this file into your Lib/SAVFNL. FTP the remaining *.SVF file to the remaining save file on your IBM i machine.

5. Verify that the file was transferred successfully using the following command:

```
DSPSAVF FILE(YourLib/YourSaveFileName)
```

6. Restore the objects to your product library using the following command.

```
RSTOBJ OBJ(*ALL) SAVLIB(G1NLPGMS) DEV(*SAVF)
SAVF(YourLib/YourSaveFileName) MBROPT(*ALL) ALWOBJDIF(*ALL)
```

G1NLPGMS is the default product library. If your product library is not the default G1NLPGMS, you will need to add an RSTLIB (YourProductLibrary) parameter to the above command.

Note: Restore the objects to your global install library using the following command:

```
RSTOBJ OBJ(*ALL) SAVLIB(G1@@PGMS) DEV(*SAVF) SAVF(YourLib/SAVF@@)
MBROPT(*ALL) ALWOBJDIF(*ALL)
```

G1@@PGMS is the default global install library. If your global library is not the default G1@@PGMS, you will need to add an RSTLIB (YourFunctionLibrary) parameter to the above command. Restore the objects to your product library using the following command:

```
RSTOBJ OBJ(*ALL) SAVLIB(G1NLPGMS) DEV(*SAVF) SAVF(YourLib/SAVFNL)
MBROPT(*ALL) ALWOBJDIF(*ALL)
```

G1NLPGMS is the default product library. If your product library is not the default of G1NLPGMS, you will need to add an RSTLIB (YourFunctionLibrary) parameter to the above command.

7. Check your job log (DSPJOBLOG) to ensure that all objects were successfully restored. You can compare the results of Step 5 with the job log to ensure that all of the intended objects transferred and installed properly.
8. You may now delete or clear the save file(s) that was created in Step 3.

Note: If you are ready to install the product database, follow the instructions in [Installing USPS Data](#) on page 79.

Installing Your Software License Key

Pitney Bowes distributes new VeriMove software license keys on an annual basis.

Installing Your NCOA^{Link} License Key

To install your NCOA^{Link} license key, follow these steps:

1. Call program G1NLEDTCFG in G1NLPGMS.
2. Replace the previous NCOA^{Link} key in your configuration file with your new NCOA^{Link} key.
3. Save the configuration file.

Getting Started with VeriMove

For information on getting started with VeriMove, refer to your VeriMove User's Guide.

6 - Configuring Your VeriMove Installation

In this section

Configuring Your VeriMove Installation

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Configuring Your VeriMove Installation

The settings in the VeriMove config.ini configuration file (Windows, Unix, Linux) or sampcnfg configuration file (z/OS) determine how VeriMove processes your files.

- If you are a new VeriMove user, the installation program installs the config.ini configuration file as part of the normal installation process.
- If you are an existing VeriMove user, the installation program installs the config.ini.distribute configuration file into the installation directory and leaves your original config.ini configuration file intact.

You can process with VeriMove using the default settings in the config.ini file or you can change the settings in the config.ini file to conform to your specific installation site requirements.

Note: The configuration file includes preset values tested for optimum performance across platforms. Changing the preset values may adversely affect your system performance. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing any preset default values.

Refer to the table below for information on populating your config.ini configuration file.

Table 16: Configuration File Properties

Property	Description
General Attributes (All Environments)	
Registered Company	Name of the PAF registered company.
Registered User	Name of the PAF registered user.
NCOA ^{Link} Key	NCOA ^{Link} key assigned to you by Pitney Bowes.
SerialNumber	Serial number assigned to you by Pitney Bowes.
NCOA ^{Link} Platform ID	Four-character platform ID assigned by the USPS.
Licensee	Customer name as you want it to appear on the reports sent to the USPS.

Property	Description
NCOA ^{Link} License Type	Type of NCOA ^{Link} license: 0 Full Service Provider 1 Limited Service Provider 2 End User
Report Attributes (Windows, Unix, and Linux Only)	
ReportPath	Path name for generated report files.
Matching Attributes (All Environments)	
Business Name Matching Enhancements	Business Name Matching level. 0 Use the standard Business Name Matching process. The default value is 0. 1 Use the enhanced Business Name Matching process. This option, using additional algorithms, may improve Business Name Matching for a small cost in performance and slightly slower run times.
Internal CASS Processing Attributes (Windows, Unix, and Linux Only)	
CASSSerialNumber	CASS serial number that Pitney Bowes assigned to you. If you are a new VeriMove customer, your CASS serial number is included with your product shipment. If you are an existing VeriMove customer and want to continue using external CASS processing, specify your current CASS serial number. If you are an existing VeriMove Unix or Linux customer using external CASS processing and you want to start using the VeriMove internal CASS processor, contact your Technical Support Representative for your CASS serial number. If you decide to switch from external CASS processing to the VeriMove internal CASS processor, in accordance with your USPS license agreement, you must recertify your current VeriMove configuration with the USPS. Your Technical Support Representative can answer any questions you may have on recertifying with the USPS.
DPVKey	To perform DPV processing using the VeriMove internal CASS processor, specify your DPV product software key as provided by Pitney Bowes.

Property	Description
LACSKey	To perform LACS ^{Link} processing using the VeriMove internal CASS processor, specify your LACS ^{Link} product software key as provided by Pitney Bowes.
DPVMemory	<p>(Optional) Memory model for DPV processing:</p> <p>P Pico. Stores no data in memory. No tables or indexes are loaded.</p> <p>U Ultra-small. Stores no data in memory. Partial indexes are loaded.</p> <p>S Small</p> <p>M Medium</p> <p>L Large</p> <p>H Huge. Stores all data in memory.</p> <ul style="list-style-type: none"> • blank or missing — Defaults to: <ul style="list-style-type: none"> S — When you specify NCOA Use High Memory=0 (default value for NCOA Use High Memory) H — When you specify NCOA Use High Memory=1
LACSLinkMemory	<p>(Optional) Indicates the memory model for LACS^{Link} processing:</p> <p>P Pico. Stores no data in memory. No tables or indexes are loaded.</p> <p>U Ultra-small. Stores no data in memory. Partial indexes are loaded.</p> <p>S Small</p> <p>M Medium</p> <p>L Large</p> <p>H Huge. Stores all data in memory.</p> <ul style="list-style-type: none"> • blank or missing — Defaults to: <ul style="list-style-type: none"> S — When you specify NCOA Use High Memory=0 (default value for NCOA Use High Memory) L — When you specify NCOA Use High Memory=1

Property	Description
SuiteLinkMemory	<p>(Optional) Indicates the memory model for Suite^{Link} processing:</p> <p>P Pico. Stores no data in memory. No tables or indexes are loaded.</p> <p>U Ultra-small. Stores no data in memory. Partial indexes are loaded.</p> <p>S Small</p> <p>M Medium</p> <p>L Large</p> <p>H Huge. Stores all data in memory.</p> <ul style="list-style-type: none"> blank or missing — Defaults to: <ul style="list-style-type: none"> S — When you specify NCOA Use High Memory=0 (default value for NCOA Use High Memory) L — When you specify NCOA Use High Memory=1

High Memory Attributes (All Environments)

NCOA Use High Memory	<p>Specify whether to use high memory using these codes:</p> <p>0 Turns off the large memory model. This is referred to as the small memory model. Use this option when only a small amount of limited real memory is available to you. The default value is 0.</p> <p>1 Turns on the large memory model. A large number of data files are loaded into memory to improve performance. Use this option only if you have enough free real memory available (see note below).</p> <p>Note: When using the large memory model and internal CASS processing, VeriMove uses approximately 1.7 GB of memory. When using the large memory model and external CASS processing, VeriMove uses approximately 1 GB of memory.</p> <p>For HP-UX Unix, if you are running on an Itanium based machine, the large memory model will not work for NCOA^{Link} processing. Set this option to 0.</p> <p>When VeriMove is set to “Large Memory Model” (NCOA Use High Memory=1), DPV, LACS^{Link} and Suite^{Link} are configured to the “L” (Large) memory model. When VeriMove is set to “Small Memory Model” (NCOA Use High Memory=0), DPV, LACS^{Link} and Suite^{Link} are configured to the “U” (Ultra) memory model.</p> <p>It is recommended that you sort your list(s) in ZIP Code order to achieve optimum performance.</p>
----------------------	---

Property	Description
Small Memory Attributes (All Environments)	
SmallMemEnh	<p>This feature enhances the small memory model only. To turn on the small memory model, specify configuration variable NCOA Use High Memory = 0. To turn on the small memory model enhancement, you must also specify SmallMemEnh=1. The small memory model enhancement may provide a performance gain when running in small memory model if your list is sorted in ZIP Code order. If your list is sorted in ZIP Code order and there are a large number of records within the same ZIP Code segment (first two digits of the ZIP Code), you can use the small memory model enhancement to have VeriMove load an entire segment into memory and perform memory lookups for each record. This process may improve performance by not performing an I/O lookup on disk for each record.</p> <p>Specify whether to use the small memory model enhancement:</p> <ul style="list-style-type: none"> 0 Do not use the small memory model enhancement. The default value is 0. 1 Use the small memory model enhancement for a potential performance enhancement. <p>Note: To use the small memory model, specify configuration variable NCOA Use High Memory = 0.</p> <p>It is recommended that you sort your list(s) in ZIP Code order to achieve optimum performance.</p>
Internal Diagnostic Attributes (All Environments)	
NCOA Logging	Used for internal diagnostics. The default value is 0.
Footnote Legend (All Environments)	
NCOA Footnote Legend	<p>Defines the appearance of the NCOA^{Link} Footnote Statistics section in the NCOA^{Link} Processing Summary Report.</p> <ul style="list-style-type: none"> 0 The NCOA^{Link} Footnote Statistics section in the NCOA^{Link} Processing Summary Report does not include a description for each footnote. 1 The NCOA^{Link} Footnote Statistics section in the NCOA^{Link} Processing Summary Report includes a short text description for each footnote. The default value is 1. <p>For information on how the NCOA^{Link} Footnote Statistics section displays in the NCOA^{Link} Processing Summary Report, see the section "NCOA^{Link} Footnote Statistics" in Chapter 6, Reports in your VeriMove User's Guide.</p>

Property	Description
Database Attributes (All Environments)	
NCOA Use Flat Single	<p>Specifies whether to use a single (vs. 26 A-Z) flat file database.</p> <p>0 Use the 26 flat file A-Z database.</p> <p>1 Use the single flat file database.</p>
NCOA Use Flat Hash	<p>Determines whether to use the 26 hash files that are used to do a quick test to see if the full data needs to be looked up. The hash files are not strictly necessary for the operation of the flat file database, since a single lookup is done to get all information. Most tests, however, show that using the flat hash files improves performance.</p> <p>0 Do not use the flat hash files.</p> <p>1 Use the flat hash files (default value).</p>
Thread Interval Attributes (All Environments)	
Interval Input	<p>Frequency of the input thread gaining control of processing. The default value is 6. The recommended range is from 0 to 100.</p> <p>CAUTION: A change to this value can impact throughput, wait time, and CPU usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The smaller the value specified, the more frequently the thread awakens to determine if work is available.</p> <p>A guideline for the Input Thread is to be 1-3 times greater than the value specified for the NCOA Thread to allow for queue transfer to NCOA Thread.</p>
Interval NCOA	<p>Frequency of the NCOA thread gaining control of processing. The default value is 2. The recommended range is from 0 to 100.</p> <p>CAUTION: A change to this value can impact throughput, wait time, and CPU usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The smaller the value specified, the more frequently the thread awakens to determine if work is available.</p> <p>The NCOA Thread should always be kept at a low value. This thread should rarely sleep, and for very short periods of time, to avoid impacting performance.</p>
Interval Move	Reserved for future use.

Property	Description
Interval Output	<p>Frequency of the output thread gaining control of processing. The default value is 8. The recommended range is from 0 to 100.</p> <p>CAUTION: A change to this value can impact throughput, wait time, and CPU usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The smaller the value specified, the more frequently the thread awakens to determine if work is available.</p> <p>A guideline for the Output Thread is to be 2-4 times greater than the value of the NCOA Thread to avoid excessive wakes.</p>
Queue Size Attributes (All Environments)	
Queue Size Input	<p>Number of input records that can be processed through the input thread before the queued records are passed to the next processing step. The default value is 3000.</p> <p>CAUTION: A change to this value can impact throughput and memory usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The recommended range is from 200-50,000 in 100 record increments. The queues are held in memory. The higher the queue size specified, the more memory that will be required.</p>
Queue Size Job Input	<p>Number of input records VeriMove processes through the input thread before passing the records to preliminary NCOA^{Link} move prequalification processing. The default value is 3000.</p> <p>CAUTION: A change to this value can impact throughput and memory usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The recommended range is from 200-50,000 in 100 record increments. The queues are held in memory. The higher the queue size specified, the more memory that will be required.</p> <p>A general guideline is for the size to match the queue size of the input queue.</p>

Property	Description
Queue Size NCOA	<p>Number of prequalified records passed to the move thread or to the output thread. The default value is 4000.</p> <p>CAUTION: A change to this value can impact throughput and memory usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The recommended range is from 200-50,000 in 100 record increments. The queues are held in memory. The higher the queue size specified, the more memory that will be required.</p> <p>A general guideline is for the size to be two times the queue size of the job queue.</p>
Queue Size Move	Reserved for future use.
Queue Size Output	<p>Number of output records that can be written to the output file including move and non-move records. The default value is 3000.</p> <p>CAUTION: A change to this value can impact throughput and memory usage. Pitney Bowes recommends you consult with a Technical Support Representative or Professional Services Representative before changing this value.</p> <p>Note: The recommended range is from 200-50,000 in 100 record increments. The queues are held in memory. The higher the queue size specified, the more memory that will be required.</p> <p>A general guideline is for the size to be equal to the queue size of the job queue.</p>
Mainframe Upload Attributes (z/OS Only)	
UploadSourceFolderUSPS	This is the folder on the Windows computer that will contain the NCOA ^{Link} data that has been decompressed and is ready to upload to the mainframe. For information on the NCOA ^{Link} data installation process, see Installing NCOALink Data on Windows and z/OS on page 10.
UploadSourceFolderVeriMove	The folder on the Windows computer that contains the VeriMove data files to be uploaded to the mainframe. Generally this will be the same as UploadSourceFolderUSPS.
File Allocation Attributes for Sequential Datasets (z/OS Only)	

Property	Description
UploadSeqTargetPrefixUSPS	High level qualifier to be prepended to the file names of the NCOA ^{Link} sequential datasets.
UploadSeqTargetPrefixVeriMove	High level qualifier to be prepended to the file names of the VeriMove sequential datasets.
UploadSeqTargetSuffix	(Optional) Value to append to file names when creating sequential datasets.
UploadSeqTargetVolumes	(Optional) Volume serial number(s) used for allocating sequential datasets.
UploadSeqTargetUnit	Device unit to use when allocating sequential datasets. For example, "SYSDA" or "3390".
UploadSeqRetainFor	(Optional) The number of days to retain the sequential files uploaded to the mainframe. If you specify this parameter, do not specify the UploadSeqRetainTo parameter.
UploadSeqRetainTo	(Optional) The day that uploaded sequential files will expire, in the format YYYYDDD (Julian format). If you specify this parameter, do not specify the UploadSeqRetainFor parameter.
File Allocation Attributes for VSAM RRDS Datasets (z/OS Only)	
UploadRRDSTargetPrefixUSPS	High level qualifier to be prepended to the names of the USPS VSAM RRDS datasets.
UploadRRDSTargetPrefixVeriMove	High level qualifier to be prepended to the names of the VeriMove VSAM RRDS datasets.
UploadRRDSTargetVolumes	List of volumes to use when allocating VSAM RRDS datasets. The list can be either comma or space separated.
UploadRRDSRetainFor	(Optional) The number of days to retain the VSAM RRDS files uploaded to the mainframe. If you specify this parameter, do not specify the UploadRRDSRetainTo parameter.
UploadRRDSRetainTo	(Optional) The day that uploaded VSAM RRDS files will expire, in the format YYYYDDD. If you specify this parameter, do not specify the UploadRRDSRetainFor parameter.



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