

## Installation and Configuration of Monetra

### Components

- These are the various software offerings we have. They all relate in some way to our core product, Monetra itself.

### Monetra Installer

- Required in order to install any of the other products listed below.
- It handles installation, uninstallation, upgrades, and license updates
- Must be run on the same machine as you are performing your task (as listed in the previous bullet)
- Same usage of this utility for every OS we run on. Look, feel, and operation should be identical no matter the platform.
- Supports both online (internet) installations and upgrades where it will auto-fetch the packages from our servers, as well as offline if no internet connectivity is available.
- For online mode, it uses the same authentication as you would log into the `_client_` area of our website (partner logins will NOT work)
- For online mode, requires access to `keyserver.mainstreetsoftworks.com` (216.155.126.3) port 443 for fetching license details, and `www.monetra.com` (216.155.126.2) port 443 (or port 80 for non-secured connections) for fetching the packages to install
- Also supports advanced deployments (SQL and Clustered installs)
- NOTE: there are some clients (PapaJohns, PizzaHut) who do not use the Monetra Installer, this is by special contract because of their mass automated deployments, we otherwise `_require_` customers to use it as it greatly reduces our support overhead.

### Monetra Payment Engine

- This is our core product, Monetra
- It has no graphical user interface, it runs only in the background and is controlled via external connections.

### Monetra Manager

- This is our base configuration utility which performs these tasks:
  - Provides a graphical user interface to manage the settings in our config files
    - `main.conf`, `prefs.conf`, `modules.conf`, `processors.conf`
    - Located in:
      - `/etc/monetra` on Linux/Unix/MacOSX systems
      - `C:\Program Files\Main Street Softworks\Monetra\etc` on Windows systems
  - Generates a unique/random encryption key for the database
  - Provides an interface to start and stop the Monetra engine
  - Provides real-time a log viewer interface
  - Provides the ability to set the run-time debug levels
  - Provides ability to send support inquiries, encrypted log files and config files

### Installation and Configuration of Monetra

#### Components

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#### Basic Engine Configuration

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- Provides basic license information
- Monetra need not be running to use the Monetra Manager (obviously, since it can start and stop Monetra)
- This utility, too, is the same for every OS. Look, feel, and operation should be identical no matter the platform.
- This utility can only be run on the same machine as the Monetra Engine resides (though if using a Unix/X11 system, can be viewed remotely through SSH X11 forwarding if desired, or Remote Desktop or VNC on Windows and Mac, respectively).
- Most Unix/Linux people opt not to use this utility and just modify our heavily commented configuration files themselves.

### Monetra Administrator

- This is our utility whose primary purpose is to manage user accounts within Monetra
  - A user account is linked to one or more merchant accounts for processing payments
  - Add/Edit/Delete/Enable/Disable/Unlock functions
- Monetra must be running in order to log into the Monetra Administrator
- Must log in as the MADMIN user or an MADMIN sub user
- Also used to perform these tasks:
  - Change the Monetra Administrative (MADMIN) password
  - Create sub-users for the MADMIN user
    - Used to create users with access to MADMIN-level functions
      - Allows a username and password to be assigned to the individual
      - Allows fine-grained permissions
  - Export or Import the data from the same or earlier release of Monetra.
    - Exports are always encrypted, you must store the key returned in the results securely
    - Imports may or may not be encrypted depending on the version of Monetra it originated from (as of v7.3, all export files are encrypted)
  - Can pull a list of system-level statistics on the number of transactions being performed on a per-user or per-timeframe basis
  - Ability to pull security audits (every transaction that flows through Monetra as well as the originating connection)
  - Ability to pull connectivity error reports (connectivity errors \_to\_ processing institutions)
- This utility, too, is the same for every OS. Look, feel, and operation should be identical no matter the platform.
- This utility does NOT need to be run on the same machine as the engine. It is network-enabled and uses a secure SSL (port 8444) connection for communication. It can also be assigned for a different OS than the Engine runs on.

### Monetra Client

- This utility is used to run and manage (e.g. settle, void) transactions, pull reports, etc
- Monetra must be running in order to log in using the Monetra Client
- Must log in as a standard user (e.g. NOT MADMIN or an MADMIN subuser)
- Can also create and manage sub users
  - Ability to assign usernames and passwords associated with this user account
  - Restricted, fine-grained permissions with the ability to completely restrict access to sensitive data
- Most customers use Monetra through an integrated POS or Web Shopping Cart, so may never use the Monetra Client, or only use it for administrative tasks like reporting or settlement
- This utility, too, is the same for every OS. Look, feel, and operation should be identical no matter the platform.
- This utility does NOT need to be run on the same machine as the engine. It is network-enabled and uses a secure SSL connection for communication. It can also be assigned for a different OS than the Engine runs on.

### Monetra Wizard

- This is our quick and easy automated setup utility which does these tasks with minimal user interaction:
  - Generates a database encryption key
  - Creates all user accounts for a merchant (prompting only for desired usernames and passwords)
  - Detects and configures modems if applicable, and enables the processing institutions used and sets appropriate failover logic
- The user must store their merchant account information within our key server in order to use the Wizard
- Not that many people currently use it, but it is mainly because we do not push it on people at this point. If we ever start bundling installation support, its use will be mandatory.
- This utility, too, is the same for every OS. Look, feel, and operation should be identical no matter the platform.

- This utility can only be run on the same machine as the Monetra Engine resides
- Monetra need not be running to run the Wizard, as the wizard will perform initial configuration and auto-start Monetra

### Monetra CardShield Inject

- This utility is strictly used for injecting encryption keys into encrypting card readers and key-entry devices
  - Currently IDTech is the only manufacturer we support
- Significant component of our CardShield End-to-End encryption initiative
- This utility, though designed to be cross-platform, is currently only supported on Windows and Linux (as USB code has not been written for other platforms)
- This utility, too, is the same for every OS. Look, feel, and operation should be identical no matter the platform.
- This utility does NOT need to be run on the same machine as the engine. It is network-enabled and uses a secure SSL connection for communication. It can also be assigned for a different OS than the Engine runs on.
- Monetra must be running in order to use the CardShield Injection utility

### Monetra CardShield Client

- This utility is meant to be integrated with POS systems.
- It is meant to remove POS systems from PA-DSS scope by acting as the layer which takes the user input/sensitive data.
- Must log in as subuser of a standard user (e.g. NOT MADMIN or an MADMIN subuser)
- This utility, too, is the same for every OS. Look, feel, and operation should be identical no matter the platform.
- This utility does NOT need to be run on the same machine as the engine. It is network-enabled and uses a secure SSL connection for communication. It can also be assigned for a different OS than the Engine runs on.

### Prerequisites

- There are no general prerequisites for Monetra other than running on an OS we support, Monetra tries to be as self-contained as possible
  - helpful FAQ on supported OS's: [http://www.monetra.com/faq/support/01\\_os\\_policy.html](http://www.monetra.com/faq/support/01_os_policy.html)
- Well, there is one prerequisite, a competent individual performing the installation and configuration that actually understand the system they are installing on (unfortunately, more rare than you would think)

### Windows

- None

### MacOSX

- None

### Linux

- Must have /etc/init.d/ or /etc/rc.d/init.d directory to put init script, otherwise install may fail

### FreeBSD

- None

### OpenBSD

- v4 is only supported

### SCO OpenServer

- GNU gzip in order to extract our Monetra Installer package
  - v6 has it already
  - v5 Available from: <ftp://ftp2.sco.com/pub/skunkware/osr5/vols/gzip-1.2.4-VOLS.tar>
- A suitable random number/entropy source. This is used for cryptographic operations.
  - v6 and v5.0.7 appear to already include PRNGd. But if not for some reason, available here:
    - <ftp://ftp2.sco.com/skunkware/osr5/vols/prngd-0.9.23-VOLS.tar>

- If installing the skunkware PRNGd, the socket listens at a non-standard location so a symlink is necessary:

```
ln -sf /usr/local/var/prngd/prngd-pool /dev/egd-pool
```

## Solaris

- The Monetra Installer may need to add user accounts to the system and does so via the `useradd -m ${USER}` method. You must properly configure your system to allow this, specifically, you need to set up the default home directory. Most sysadmins most likely will have already done this, but if not, this is an easy way:

```
mkdir -p /export/home  
useradd -D -b /export/home
```

- GNU gzip in order to extract our Monetra Installer package
  - Current versions appear to include this already, if not, download from <http://sunfreeware.com>
- A suitable random number/entropy source. This is used for cryptographic operations.
  - Solaris 9 and 10 already have this, and fully patched versions of Solaris 8 (#112438) do as well
  - If not, either install patch #112438 or <http://www.cosy.sbg.ac.at/~andi/SUNrand/>

## AIX

- Must be running AIX 5.3 TL (Technology Level) 11 or higher

## Installation Procedure

### Note about GUIs for Unix users performing Remote Installs

- It is possible for Linux/Unix users who remotely connect to their server running Monetra to gain access to GUIs, via 2 potential methods, assuming they have the ability to log in via SSH.
  - The first method is known as X11 forwarding, where the GUIs run locally on the same host machine as Monetra, but the display is forwarded to the remote guest. This will work for all GUIs.
  - The second method is to use an SSH tunnel to forward the necessary ports to connect to Monetra, but the GUIs run on the remote guest. Since the applications do not run on the same machine as Monetra, not all GUIs can be supported (e.g. the Monetra Administrator will work, but the Monetra Manager will not).

### X11 Forwarding

- Requirements on remote Host:
  - X11 base libraries (X-Server not required)
  - xauth (used indirectly, by ssh, to extract authorization records from one machine and merge them into another)
  - If forwarding through SSH, the `/etc/ssh/sshd_config` file MUST have `X11Forwarding yes` enabled
- Requirements for local client machine acting as a Guest:
  - Either an X11 server running, or some sort of emulator:
    - Windows clients
      - cygwin with X11 and ssh: <http://x.cygwin.com/>
      - Xming with Putty: <http://www.straightrunning.com/XmingNotes/>
    - Mac clients
      - X11 should be installed by default, just run it from `/Applications/Utilities/X11.app` and open an xterm to perform the connection
    - Linux/unix clients
      - A running X11 server (which is true for any desktop-oriented Linux/Unix workstation)
- Forwarding using SSH (recommended)
  - Just run ssh with the `-Y` flag to enable X11 forwarding: `ssh -Y yourusername@remotehost`
  - Once connected, type `echo $DISPLAY` to see if forwarding is enabled, it should say something like `localhost:10.0`
  - You can then run any X11 application and it should be displayed on your local screen rather than the remote host's screen

- Forwarding without tunneling (deprecated)
  - Forwarding without tunneling is deprecated as most X11 servers do not listen on TCP any more and thus requires a reconfiguration of the X server on the local client (guest). This is not something we will discuss and is up to you to figure out.
  - Log into the remote host
  - Set the 'DISPLAY' environment variable to your IP address or resolvable hostname such as: `export DISPLAY=192.168.1.155:0.0`
  - Run any X11 application, and assuming you don't have firewall issues and your client/guest is listening on TCP, the X11 application should appear
- **NOTE:** for applications which require 'root' privileges, it may be necessary to use `sudo -E` to run them. The `-E` tells it to preserve the DISPLAY environment variable.

## SSH port tunneling

### From a Linux/Unix workstation

- You are going to ssh in, in a very similar manner to how you would normally ssh in, except you are going to add an additional option:

```
-L 8444:localhost:8444
```

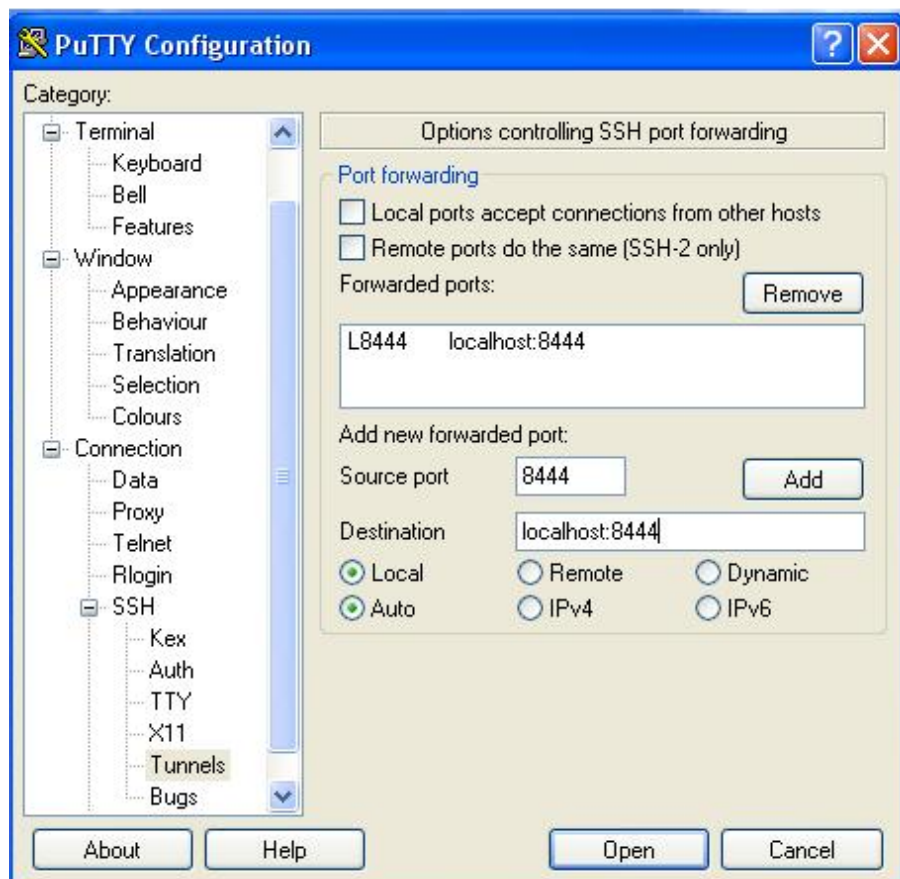
- So a full example might be:

```
ssh -L 8444:localhost:8444 user@remotehost.com
```

- This option tells it to listen on local port 8444, and when a connection comes in, connect to 'localhost' on the `_remote_` machine on port 8444. (Monetra's SSL port).
- **Note:** If you have a local instance of Monetra running on the machine, telling ssh to listen on port 8444 will conflict. If that is the case, then the first 8444 listing in the command option should change to some unused port such as 9999.
- Once logged in, the tunnel should be established.

### From a Windows workstation

- A popular SSH client for Windows is Putty, available from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>
- If you are unfamiliar with Putty, you should first ssh in normally until you grasp the configuration concepts which are out of scope for this document.
- This SSH client supports port forwarding configuration options under Category->Connection->SSH->Tunnels as per the screenshot below:



- The source port is the port to listen on, on the local machine. This is typically port 8444 unless you already have an instance of Monetra running already on your local machine, in which case, you should choose a port which does not conflict, such as port 9999.
- The Destination should always be `localhost:8444` as you are connecting to port 8444 local to that remote machine (Monetra's SSL port).
- The 'Local' radio button should be selected.
- Other than this configuration change, simply log in, and the tunnel will be automatically established once authenticated.

#### Connecting through the established tunnel

- Once you are SSH'd in to the machine, leave that SSH session open. If you close it, you won't be able to use the GUI to connect through the tunnel to Monetra as the tunnel will be shut down.
- Open the Monetra GUI you want to use
  - Configure it to connect to 'localhost' (yes, it sounds odd, but that's the way the tunnel works)
  - Configure it to use the port you specified for it to listen on. 8444 or 9999 in our examples depending on if you already have a local instance of Monetra running or not.
  - Enter your username/password and connect.
- That's it!

#### Administrator's Note

- If you administer large numbers of Monetra Engines from a single location, and are using port forwarding, we'd strongly recommend using different 'listen' ports for each remote location. It is not uncommon to have multiple SSH sessions open in such an environment, and it can get confusing as to which Monetra you may *really* be communicating with. Assigning each forward to a different listen port would effectively resolve that concern. We gave an example above of using 9999 as an alternate port if Monetra is already running on your local machine, but that is not the only possible use of changing such a port.

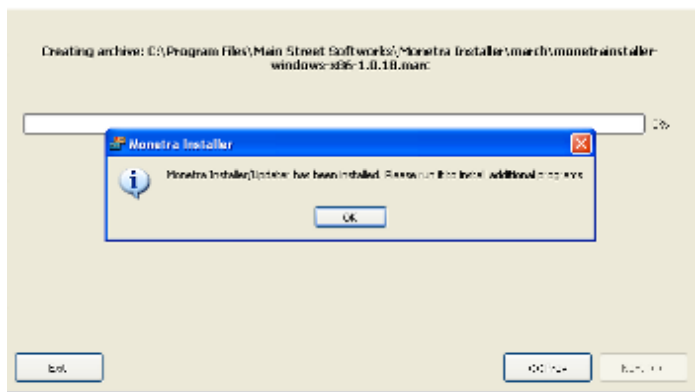
#### Important note about Unix utilities

- Unix versions of the utilities utilize 'wrapper' shell scripts to import the proper runtime libraries into your environment. You must NOT run the executable directly (the filename with -bin at the end is the executable, don't run it) as either it simply will not work, or you may receive random crashes.

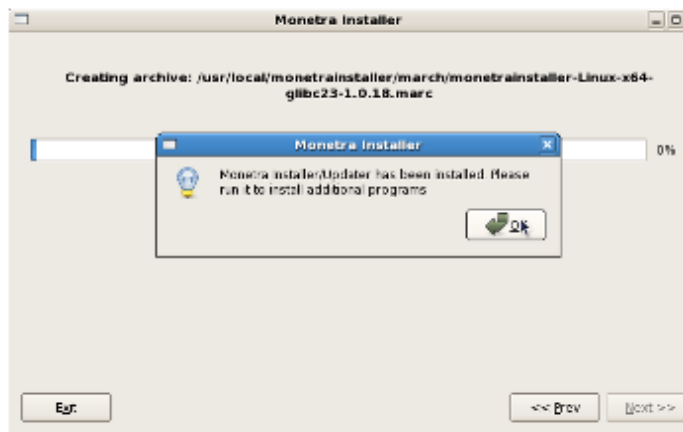
## Downloading and Installing the Installer

- The Monetra Installer can be downloaded directly from our website. User authentication is not necessary to download the installer:
  - <http://www.monetra.com/content/downloads.html>
- The user must choose the installer which is appropriate for their system (OS, 32bit vs 64bit, architecture, etc)
- The user must ensure their assigned licenses match the installer they have downloaded, if not, they should request a license OS/arch change (symptoms discussed later)
- OS Specific notes:
  - **Windows:** The download is a self-extracting exe (sfx zip archive), which upon extraction runs the Monetra Installer contained within the archive and performs a self-install
  - **MacOSX:** The download is a tar-bzip2'd MacOSX Installer Package. Once downloaded, it can be extracted by double clicking, then the installer package should be double-clicked to perform the install using the standard methods for MacOSX
  - **Unix:** The download is a tar-gzip'd package that must be extracted, then the monetrainstaller should be manually executed:
    - `gunzip -c monetrainstaller-linux-x86-glibc23-1.0.18.tar.gz | tar xvpf -`
    - `cd monetrainstaller-linux-x86-glibc23-1.0.18`
    - **X11 version:** `./monetrainstaller`
    - **Console version:** `./monetrainstaller_console`
    - Follow on-screen instructions for self-install
    - Cleanup: `cd .. && rm -rf monetrainstaller-linux-x86-glibc23-1.0.18*`
- On all platforms, except MacOSX, the installer performs a self-installation. On MacOSX, for permissions reasons, we must use the MacOSX Package Installer so the process is different.
- On all platforms, except MacOSX, if you download a newer version of the Installer than you currently have installed, an in-place self-upgrade will be performed (this is useful if the installer cannot self-update for some reason via the internet or an offline package)
- The key file for the Monetra Installer, is the 'installer.xml' file.
  - Location:
    - On Unix/MacOSX, in `/etc/monetra/installer.xml`
    - On Windows, in `C:\Program Files\Main Street Softworks\Monetra Installer\installer.xml`
- Running the Monetra Installer after installation (self-installation):
  - Windows: Click on the Program link under Start -> Programs -> Monetra -> Monetra Installer, or the Monetra Installer icon on your Desktop, or you can execute it directly from the installed path, which by default is `C:\Program Files\Main Street Softworks\Monetra Installer\monetrainstaller.exe`
  - MacOSX: It is installed to `/Applications/Monetra/Monetra Installer.app`
  - Unix: Must be run with root privileges. Installed to `/usr/local/monetrainstaller/bin/` by default:
    - Running the console version: `sudo /usr/local/monetrainstaller/bin/monetrainstaller_console`
    - Running the X11 GUI version: `gksudo /usr/local/monetrainstaller/bin/monetrainstaller`
- Troubleshooting:
  - If the installer gives a DLOPEN error when trying to load modules, the likely cause is that the temporary directory being used for package extraction is on a no-exec mounted filesystem (typically on Linux). The temporary directory is contained within the installer.xml file under the `<TmpPath>` setting and that must be changed.
  - If the installer gives library not found issues or troubles connecting to an X server, try running the console version which has fewer dependencies

Windows



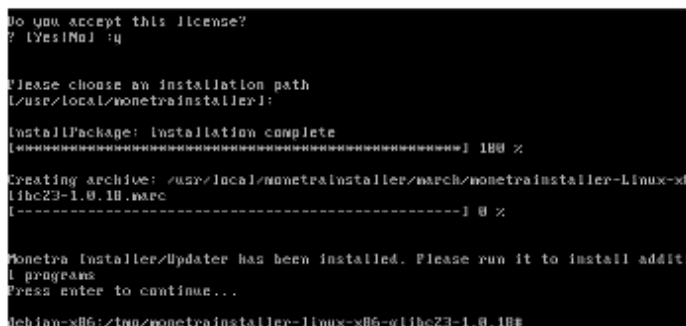
X11



MacOSX



Console



### Internet vs Offline Package

- There are 2 modes the Monetra Installer can be run in, online (internet) or offline (downloaded package)
- For online installations, you will need the username and password for your account with us. This is the same username/password you'd use to log into the client area of our website. You would also need to ensure you have access through your firewall to our servers.
- For offline installations, you will need to log into our website and generate an offline package.
  - Once generated, our website will return you a compressed package that must be downloaded and extracted prior to the Monetra Installer being able to use it.
  - You would use the Have Disk or 'Offline' option in the installer, then provide the full path to the directory created once the compressed offline package is extracted
    - This directory should contain a file called `offline_licenses.xml` along with one or more `.marc` and `.marc.md5` files.
- After the initial stage of either entering your username/password for online mode, or providing the path to the offline package in offline mode, the rest of the usage of the Monetra Installer will be identical.
- Please see the next section for more information on generating an offline package...

### Generating an Offline Package

- To generate an offline package, follow the below steps...

**LOG IN**  
To access your Main Street Softworks account, please enter the proper login credentials into the form provided below.

**Main Street Account Access**

Username / Email:

Passcode:

Login Type  Customer |  Partner

Forgot your password? [Click here](#)

1

**Customer Interface**

Company	Contact	Orders
Main Street Softworks -- Windows (edit) 5800 NW 39th Ave STB 104 Gainesville, FL 32606	MSSW Windows mssw@monetra.com 321-251-7794	You do not currently have any OF To view past orders, <a href="#">click here.</a>

2

**Software Licensing**

Lic #	LOC-ID	Product	System
<input checked="" type="checkbox"/> 24247		Engine - Small Biz (new)	windows-x86

**Monetra ® Installer Downloads**

system	download
Windows XP/2003/Server2008	<a href="#">[download]</a>

If you are looking for alternate downloads, please

- All Monetra modules may be [found here.](#)
- Offline (monetra installer) packages can be [ge](#)
- Offline license files (monetra.lic) can be [gener](#)

**Software Downloads:**

Main Street Softworks -- Windows	MSSW Windows
5800 NW 39th Ave STB 104 Gainesville, FL 32606 USA	mssw@monetra.com 321-251-7794

3

**Software Download Options:** At any time you may create an offline package(s) by putting a check next to the software items you wish to include and verifying the version of the product. Alternately, you may generate an ISO image (to burn to CDROM) by clicking on the 'Generate ISO' link at the bottom row of each package.

lic #	product	version	system/ext
<input checked="" type="checkbox"/> 24247	Engine - Small Biz (new)	7.3.3	windows-x86
<input checked="" type="checkbox"/> 24248	Monetra Client - Package	2.1.2	windows-x86
<input checked="" type="checkbox"/> 24249	Monetra Admin - Package	2.0.8	windows-x86
<input checked="" type="checkbox"/> 24250	Monetra Manager - Package	2.0.12	windows-x86
<input checked="" type="checkbox"/> 24251	Monetra Installer - Package	1.0.18	windows-x86

File Format:

**Software Downloads:**

Main Street Softworks -- Windows	MSSW Windows
5800 NW 39th Ave STB 104 Gainesville, FL 32606 USA	mssw@monetra.com 321-251-7794

4

The download you requested should start any second now. If you do not see a download start automatical the link below.

[\[Your Monetra Download\]](#)

The URL above will be active for the next two hours.

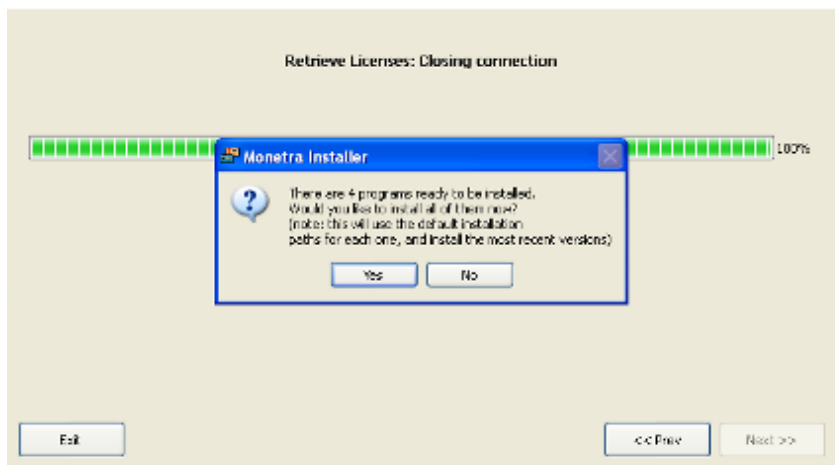
- 1. Log into the client area of our website with your username and password

2. Check the checkbox next to the package you wish to retrieve for an offline install, then click the 'Downloads' button
  3. Make sure all the programs you wish to install have checkboxes next to them
    - a. Select the appropriate versions of each license you want to install. It will default to the latest production versions.
    - b. Select the download file format. The default of .zip is appropriate for Windows, you may prefer .tar.gz for MacOSX or Unix environments
    - c. Click the 'Generate Offline Package' button
  4. Click on the '[Your Monetra Download]' link in order to download your generated offline package
- Once downloaded, the package must be extracted.
    - On windows, just double-click your downloaded .zip file and it will open up and show you the files inside. Then you can click on File->Extract All, and tell it where you want to place those files. Make sure you remember where you extracted it!
    - On Unix, for .tar.gz files, you can extract it using a command like this: `gunzip -c download.tar.gz | tar xvpf -`

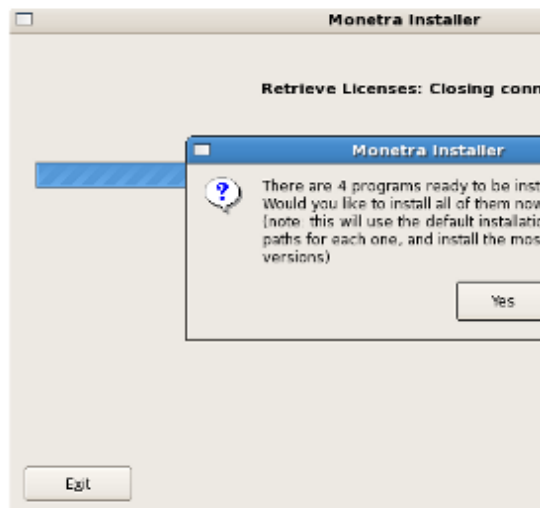
### Install all vs Install One at a Time

- If the Monetra Installer recognizes that all the licenses on your account are for the same OS, and there are no duplicate licenses (e.g., you only have 1 Engine, 1 Client GUI, 1 Administrator GUI, etc), it will ask you if you want to install all packages or not
  - If you say 'yes', it will install all the products to the `_default_` install paths using the `_latest_` stable versions of those products available.
  - If you need to install to a different path, or select a different version, you must say 'no' if prompted to install all packages.

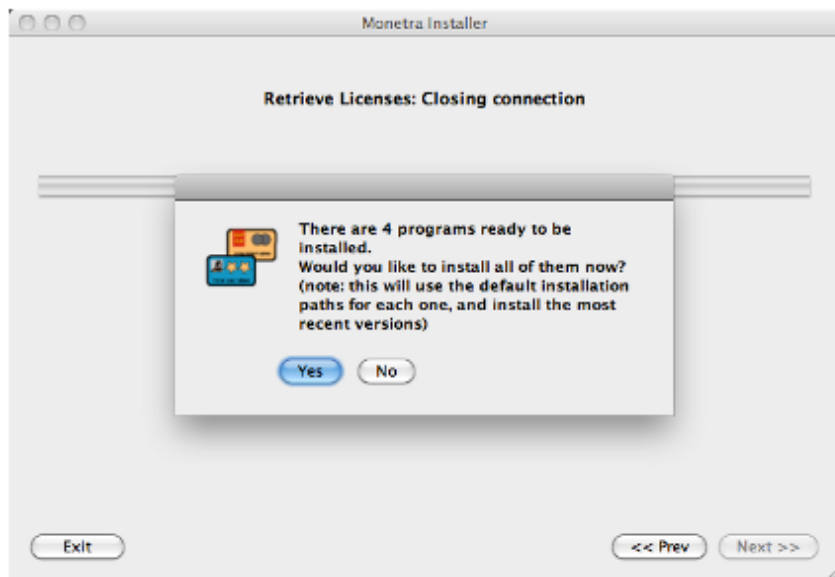
Windows



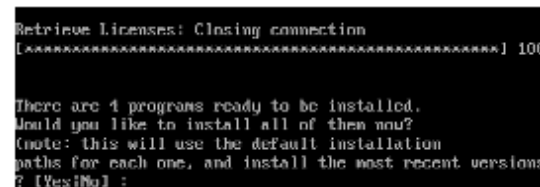
X11



MacOSX

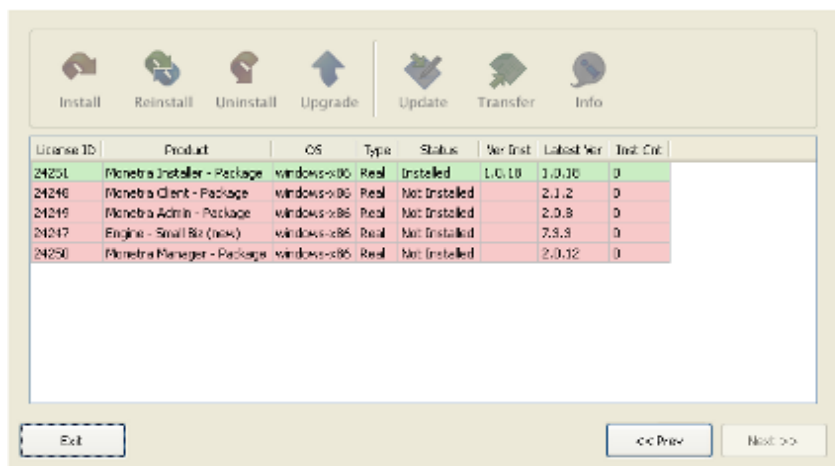


Console

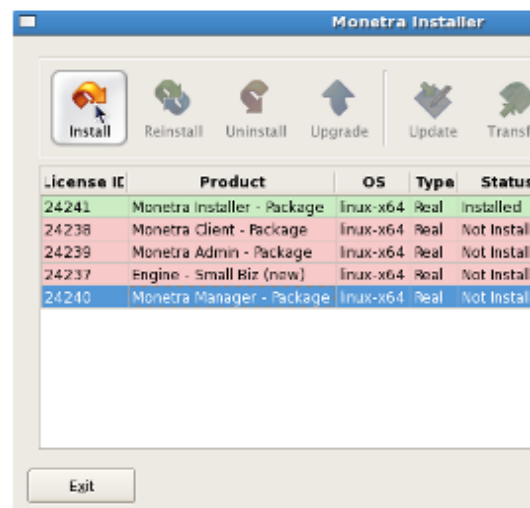


- If you selected 'no' or were not provided the prompt at all, you will be provided with a list of available licenses to install.

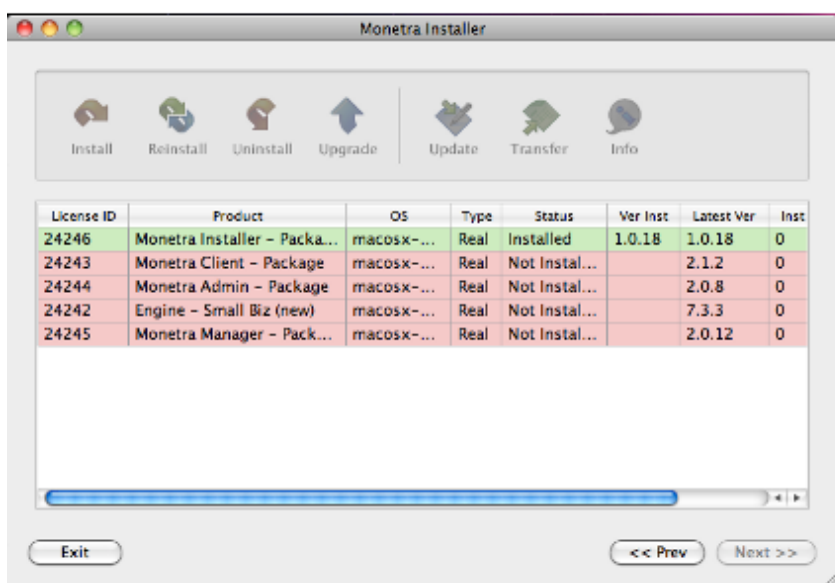
Windows



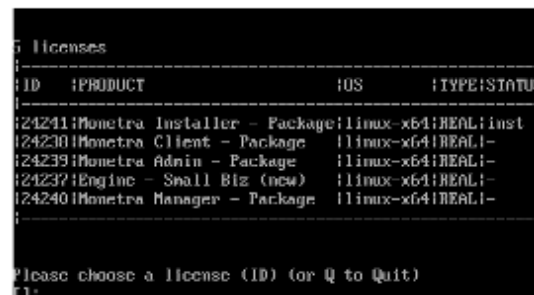
X11



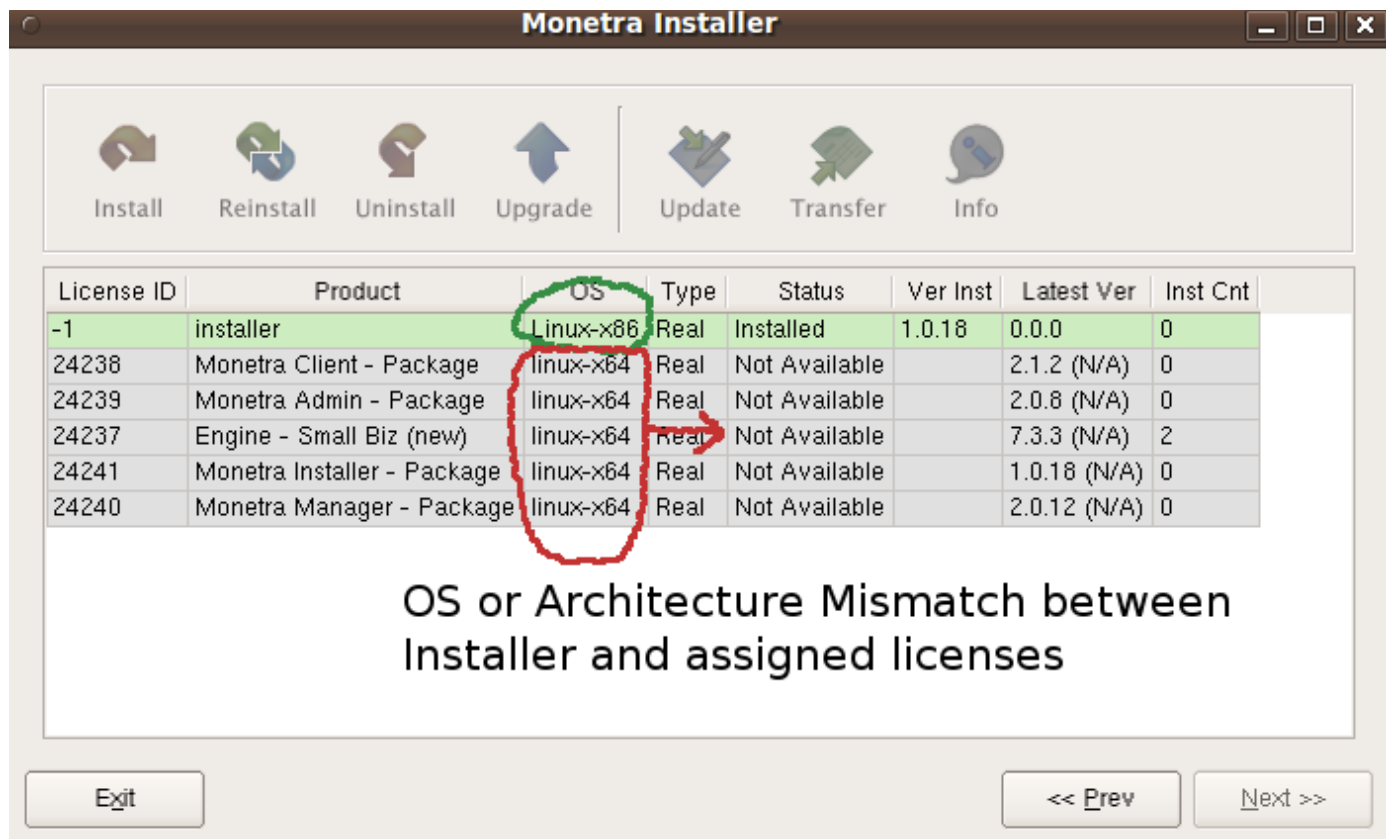
MacOSX



Console



- You may select each license 1 at a time, and choose to install them. You will first be prompted for the relevant version, then the installation path you wish to use.
- If you are in online mode, all packages and licensing will be fetched from our servers automatically.
- If you find that no packages are available for installation, it is quite likely that you downloaded a Monetra Installer version which differs from what is licensed for the account you authenticated as. Probably need to contact support to have your license changed, or uninstall the installer and fetch the appropriate installer for your platform.



### The Windows ISO (CD Image) exception

- If you generated an ISO installation from the client area of our website for Windows, it will perform an automated install of the Monetra Installer as well as all the GUI utilities with no user interaction necessary. If the customer is using the Wizard, it will automatically pop up and start taking them through the configuration steps.

## Basic Engine Configuration

### Generating an encryption key

- If using the Monetra Manager, the first time it is run, it will prompt you if you want to generate an encryption key, simply say 'yes' and that is all you need to do.



- If for some reason you need to regenerate your database key, you can do so via the Manager->Security->Database->Generate. NOTE: this must NOT be done on a live system otherwise you will lose all data!
- If configuring Monetra via a console, run the 'monetra\_keygen' utility such as:

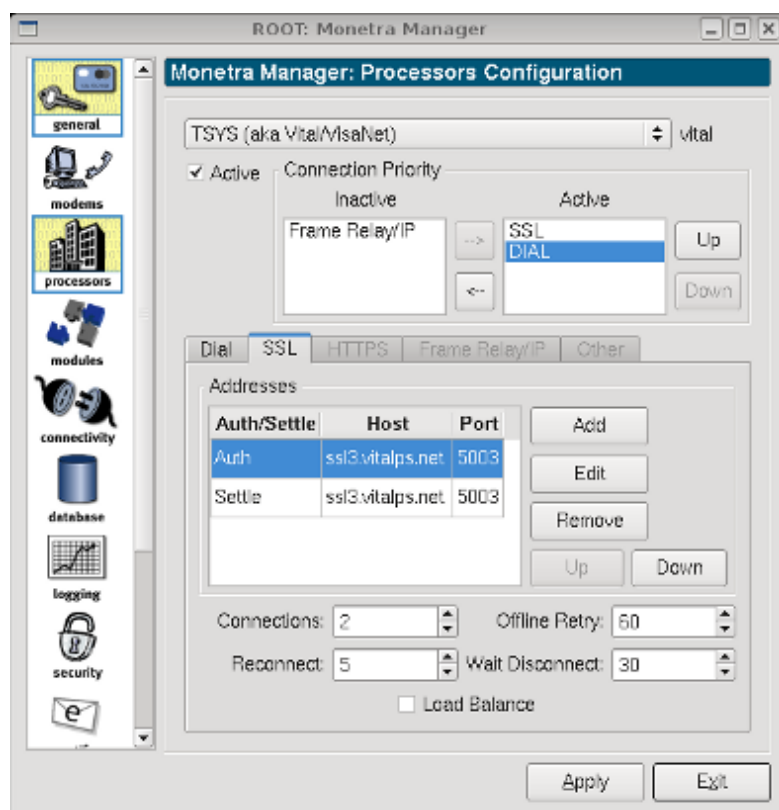
```
/usr/local/monetra/bin/monetra_keygen 256 /usr/local/monetra/my_monetra.key
chown monetra:monetra /usr/local/monetra/my_monetra.key
chmod 660 /usr/local/monetra/my_monetra.key
```

### Enabling the processing institution(s) to use (and connectivity)

- Monetra, by default, comes with all processing institutions set to inactive.
  - This saves resources, each active processing institution spawns one or more threads to handle the load
- You must activate the processing institution(s) you use before you are able to add user/merchant accounts
- If using the Monetra Manager GUI, click on Processors, then select the Processing Institution you wish to

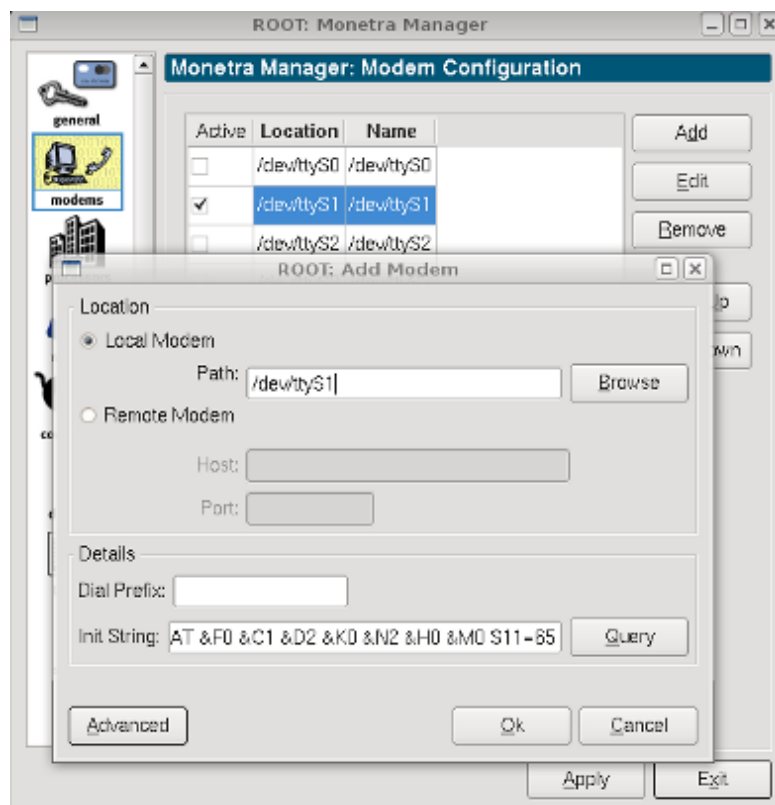
## activate

- o Check the 'active' checkbox
- o In the connection priority setting, move ONLY the connectivity methods you are going to use over to the 'active' column. For instance, if you do not have a modem make sure 'DIAL' is not in the active column.
  - You should make sure the Active column is ordered by preference of connectivity method (typically with DIAL as the last option if using Dial Backup)
  - NOTE: Frame Relay/IP refers to a dedicated circuit. Most customers do not have these as they cost thousands of dollars per month.
  - SSL and HTTPS are both secured connections, if a processing institution supports both, then SSL is preferred, and you should not activate HTTPS (as there are usually additional limitations, e.g. Tsys/Vital doesn't do Pin-DEBIT via HTTPS)
- o You might want to verify that the tabs below containing connectivity information such as phone numbers and URLs appear correct. That said, Monetra's defaults are usually on target for these, you should try them first before replacing them with other URLs for phone numbers you've received as the ones the processing institutions provide merchants are often wrong!
- o Apply and let the Manager restart the engine.
- o Do for each processing institution you wish to activate.
- If you are a command-line guy, just open up the 'processors.conf' in a text editor (typically in /etc/monetra on Unix systems)
  - o The procedure is very similar to the GUI method, locate the processing institution in the file, each one is donated as a section (standard .ini format, in square brackets) such as [VITAL]
  - o set the 'active' setting to 'yes' to activate.
  - o Set the 'conn\_priority' setting as appropriate.
    - This is a comma delimited list in order of preference for your connectivity methods.
    - Possible values: SSL, HTTPS, IP, DIAL, OTHER -- varies by processor, see comments in processors.conf
    - Do not list any connectivity methods you do not plan on using. For instance, if you don't have a modem, do NOT list DIAL.
  - o Verify the authorization and settlement phone numbers and or URLs. Monetra's defaults are usually on target for these, you should try them first before replacing them with other URLs for phone numbers you've received as the ones the processing institutions provide merchants are often wrong!
  - o Save and repeat for each processing institution you wish to activate.
  - o NOTE: Monetra must be restarted prior to the changes taking affect.



## Configuring a Modem (primary or backup)

- Monetra has been tested across a wide range of modems. Under perfect line conditions (low noise, latency), Main Street has been successful at processing transactions with every modem we've attempted (30+ from various manufacturers/chipsets).
  - If using Dialup as a primary connectivity method, or if your phone line conditions are less than perfect, or you are traversing a PBX system (avoid if possible) we strongly recommend obtaining a high quality modem.
  - Monetra controls very little when it comes to modem communication, if you have issues connecting, or extremely long delays in processing, or are noticing in your logs a lot of 'NAK' wording, that means you probably need to have your phone line checked out or upgrade to a better quality modem.
  - Recommended modems (in preference order): US Robotics External Serial 5686E, US Robotics Internal PCI 5610C, US Robotics External USB 5637
    - All recommended modems are 'hardware' modems, not 'win' or 'soft' modems and are known to work on all OSs
- Configuring using the Monetra Manager GUI
  - Go to Modems, it should display a list of serial devices (or modems) on your system.
  - Identify the modem you are using and check the 'active' checkbox
  - Click the edit button, and query the modem for an init string. This will recommend a compatible init string for your modem.
  - Apply and let it restart Monetra.
  - NOTE: If you have more than one modem, you can use them in a failover configuration, the order the modem appears is the order in which it will be used.
  - If necessary, specify a dial prefix necessary to get an external line (many PBX systems require you dial '9' to get an outside line)



- Configuring using the command line:
  - Main Street provides a utility known as `monetra_mdmquery` which can be used to locate modems, if you pass the `--find-modems` flag to the command it will attempt to open and query each serial device on your system and recommend init strings for the modems it finds:

```
$ /usr/local/monetra/bin/monetra_mdmquery --find-modems
Detecting modems/serial devices...done
```

```

Querying for modem (/dev/ttyS0) [this may take a while]...failed: timeout
Querying for modem (/dev/ttyS1) [this may take a while]...done
Modem Found! Recommended Init String: AT &F0 &C1 &D2 &K0 &N2 &H0 &M0 S11=65

Querying for modem (/dev/ttyS2) [this may take a while]...**tcsetattr(3,
failed: Could not open modem: /dev/ttyS2
Querying for modem (/dev/ttyS3) [this may take a while]...**tcsetattr(3,
failed: Could not open modem: /dev/ttyS3

```

In the above example, `monetra_mdmquery` found a modem on `/dev/ttyS1` and recommended `AT &F0 &C1 &D2 &K0 &N2 &H0 &M0 S11=65` as the init string.

- o The relevant information we need is the `/dev` path as well as the Init String that was recommended. You then need to edit the `/etc/monetra/main.conf` file to add this information:

```

modem1=/dev/ttyS1
modem1_Init=AT &F0 &C1 &D2 &K0 &N2 &H0 &M0 S11=65

```

- o If you need to dial a prefix to get an outside line, you can configure it as:

```

modem1_dialprefix=9,

```

- o If you need to configure multiple modems, just change the number after 'modem' to reflect it is another device.
- o Please reference the other comments in the config file related to modems for additional advanced settings
- Troubleshooting
  - o If your modem appears to be connecting, but transactions are not working, it is possible that enabling 'Software 7E1' encoding will fix your problem. Not all modems appear to be able to natively support 7E1 encoding in hardware so this must be done by Monetra in software (if using the manager, go to Modems->Edit->Advanced to set this).
  - o If Monetra is unable to open your modem, it is possible you did not properly set up permissions (Unix systems only)
    - Take a look at the permissions on your modem such as:

```

$ ls -l /dev/ttyS1
crw-rw---- 1 root dialout 4, 65 2010-06-28 15:51 /dev/ttyS1

```

- Note in our example that the serial device is part of the 'dialout' group. The 'monetra' user must be added to this 'dialout' group in order to be able to use the modem. An example of how to do this on Linux might be:

```

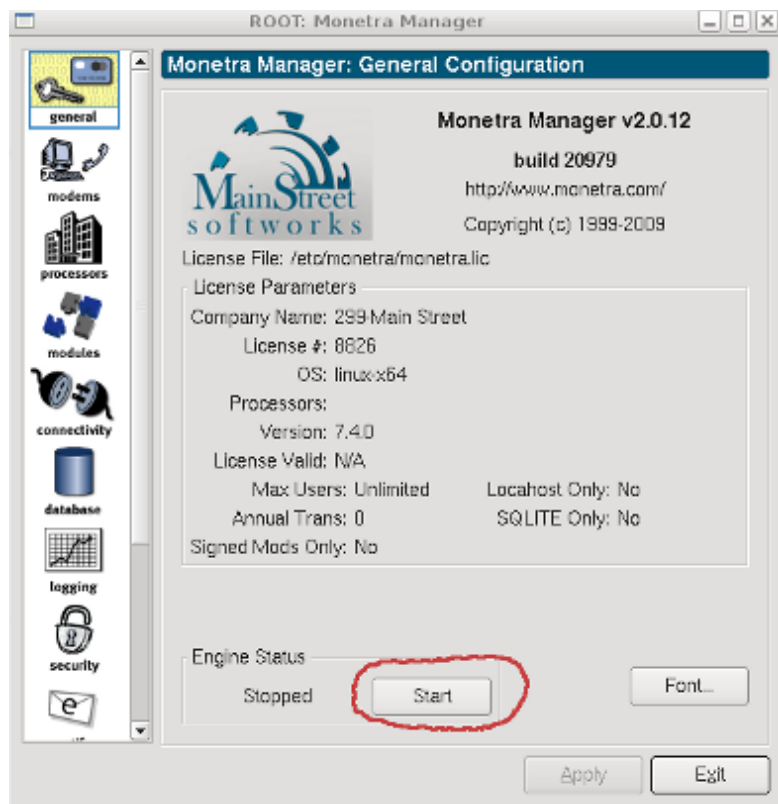
usermod -a -G dialout monetra

```

- A restart of Monetra is necessary for the change to take effect. Possibly, depending on user/group caching, you may even need to restart the entire computer or flush the user/group cache.
- Please reference your OS vendor for more information on group assignment

## Starting, Stopping, and Restarting Monetra

- The easiest way to start, stop, or restart Monetra in a cross-platform manner is to use the Monetra Manager GUI. Under the general section, there is a single button that will say 'start' or 'stop' depending on the current status of Monetra



- If on Windows, you can also manage the Monetra service:
  - Administrative Tools->Services->Monetra
  - Command Line: `net start monetra` or `net stop monetra`
- If on a unix system, you would use the Monetra init script to manage its state.
  - On linux, it is in `/etc/init.d/monetra` or `/etc/rc.d/init.d/monetra`
  - On freebsd, it is in `/usr/local/etc/rc.d/O20.monetra.sh`
  - All other systems it is accessible via `/usr/bin/monetrad`
  - The init script can take the commands 'start', 'stop', 'restart', 'status', 'forcequit'

### Starting Monetra at Boot

- Windows, MacOSX, FreeBSD, Solaris, SCO, AIX -- this is done by default
- Linux -- on most distributions, this is done by default, but due to the wide variety of init systems, it may not
  - Ubuntu: Must add the startup script to your `/etc/rc.local`
  - Gentoo: Must add the startup script to your `/etc/conf.d/local.start` and `/etc/conf.d/local.stop` (or `/etc/conf.d/local` on newer systems)

### Basic User Configuration

#### PreReq: Monetra Administrator GUI

- The only user-interactive interface to complete the following steps is the Monetra Administrator GUI.
  - This is the only supported method of adding users. The legacy/deprecated/unsupported console `monetraadm` utility will not be supported and does not include all the necessary functionality.
  - If you are using your own integrated component to add user accounts, this information does not apply.

#### Usage Note: Client and Admin profiles (bookmarks)

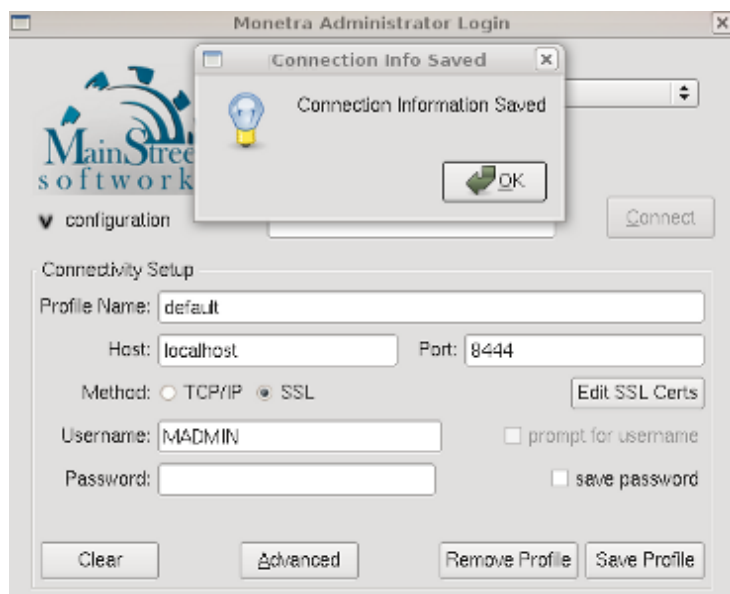
- Both the Monetra Client and Monetra Administrator GUIs use what we call profiles. This tends to be a point of confusion for most people.
- The simplest way to explain it is to draw a parallel. Profiles are no more than 'bookmarks', they simply bookmark the location of the Monetra Engine you connect to (along with how, SSL, port, etc) and the 'username' you wish to use.
- The profile (bookmark) will only reside on the same machine as you used the Monetra Client and/or

Administrator on.

- The Client and Administrator keep separate profile/bookmark listings
- The profile/bookmark is not something stored at the Monetra Engine level, if you go to a different machine that also has the Monetra Client (or Administrator) installed, the profiles there will only be what were configured on that machine. Just like if you use a friends computer, the webbrowser wouldn't have `_your_` bookmarks, only theirs.
- If you wish to copy the profiles (bookmarks) from one machine to another, it is possible.
  - On Windows, the profiles are stored in the Windows registry under `HKEY_CURRENT_USER\Software\Main Street Softworks\Monetra Client (or Monetra Admin)`
  - On Unix machines, they are located in `~/.monetra_client.conf` (or `~/.monetra_admin.conf`) files
- The profiles have nothing (directly) to do with the User/Merchant accounts in Monetra, they are just indirect 'references' to that information. If you connect from another machine, you don't have to recreate the user/merchant accounts, just create the 'bookmark'.
- To configure profiles/bookmarks, you need to click on the blue arrow (>) next to the word 'configuration' and the window will expand to provide the configuration options. During the initial startup of the GUIs for the first time on a workstation, this will be automatically expanded.
- TIP: If you manage a large number of merchant accounts with the Monetra Client GUI, it is usually better to not create a profile (bookmark) for each user account. Instead, you should check the 'prompt for username' checkbox in the profile, and it will instead simply prompt for both the username and password rather than storing the username with the profile.

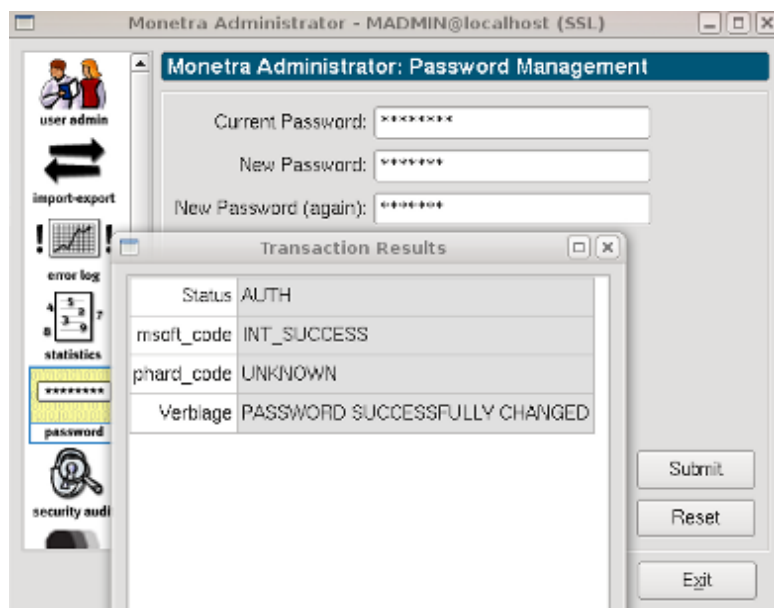
### Logging in with the Monetra Administrator

- Run the Monetra Administrator
  - Windows: Start->Programs->Monetra->Configuration->Monetra Administrator (or the Monetra Administrator icon on the Desktop)
  - MacOSX: /Applications/Monetra/Monetra Administrator.app
  - Unix/X11: by default `/usr/local/monetra/bin/monetra_admin`
- On the first run, the profile configuration box will be expanded. If it is not, click on the arrow '>' next to 'configuration' so it points down.
- Enter a profile name, if you only have 1 engine, 'default' is fine. This is just a useful name for you, it is no real meaning.
- Enter a hostname: If Monetra resides on the same machine, this should be 'localhost', otherwise have the IP address or DNS resolvable hostname ready and enter that information.
- Enter a Port: This should be port 8444 unless you have made a custom configuration
- Enter a Method: SSL should be chosen, you should not use TCP/IP
- Enter a Username: on the initial setup, only 'MADMIN' is supported
- Save Profile
- Enter the default password of 'password' and click Connect



### Changing the MADMIN password

- Upon the first login to the Monetra Administrator with the default password, you will be prompted to change your password.
- Enter the current password of 'password'
- Enter the new password you wish to assign, which must be at least 7 characters and contain both letters and numbers or special characters.
- Repeat to make sure it wasn't typo'd in the next field.
- Submit.



### Adding a User/Merchant Account

- In the Monetra Administrator, click on the User Admin tab. You will be shown the current list of users, none should be listed on an initial install.
- Click on the 'Add' button on the right
  - The 'Add' button on the bottom is for Sub Accounts (split routing, etc) and is discussed in the Advanced Configuration
- Choose a username and password to use, you will need to remember these in order to run transactions through Monetra.
  - The password must be at least 7 characters and contain both letters and numbers or special characters
- If you wish to receive e-mail notifications from automated settlements, you may enter your e-mail address in the appropriate field
  - To specify multiple addresses, semi-colon separate them
- From the Processor drop down, choose the processing institution being used
  - If you do not currently have a merchant account, or you wish to only receive simulated results for testing, you can choose the 'Monetra Loopback Emulator'
- Select the Industry your merchant account is set up to process for
- Choose the cardtypes to be accepted via this processing institution. This may directly affect what merchant account parameters are required, so make sure you choose appropriately.
- Enter in the merchant account information into the table below. Blue fields are required. Other fields are either optional or conditional depending on your setup. For more information on the meaning of each field, when you click on the field, the description at the bottom of the screen will update, please evaluate carefully.
- Submit to save the information, if you receive an error, correct it and continue

User Dialog

Username: myuser Profile Id: (none)

Password: \*\*\*\*\*

Email: someone@monetra.com

Processor: TSYS (aka Vital/VisaNet)

Proc Name: vital Help Desk Phone: 800-847-2772

Industry: RETAIL

Card Types: +VISA+MC+AMEX+DISC+DINERS+CB+JCB

Field	Value
Bank ID	888885
Merchant ID	000000000...
Store ID	5999
Terminal Number	1515
Agent ID	
Chain ID	
Zipcode	
Timezone	
Merch Category Cod	
Merchant Name	
Merchant City	
Y Number	
State Code	
Service Phone	
Merchant ABA Num	
Settlement Agent Nu	
Prestigious Property	
Sharing Group	
FCS ID	
Reimbursement Attrib	
Amex Level2 Support	
Merchant Verification	

Field Information

Field Name: SERVICEPHONE Required: Credit / Debit / EBT / Gift

Field Length: 11 character(s) Field Type: Numeric w/dash

Description: Phone number for client to call for assistance formatted as NNN-NNNNNNNN

Advanced Clear Submit Cancel

Transaction Results

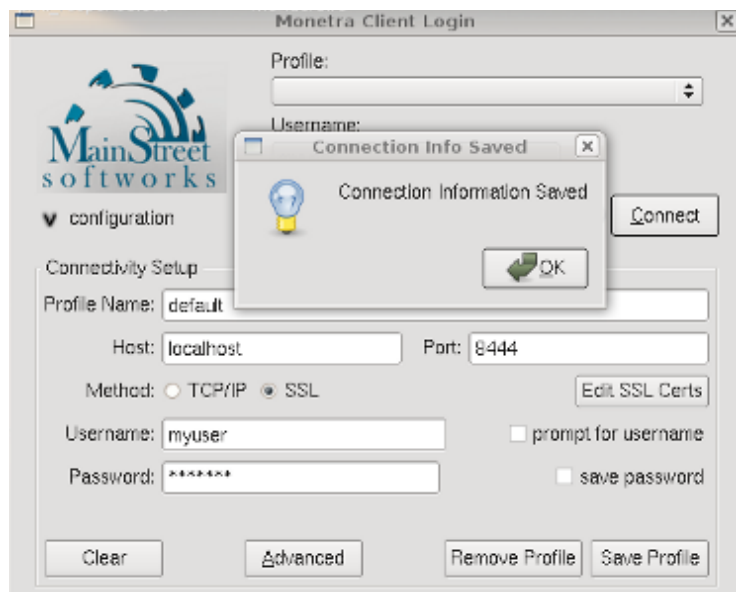
Status	AUTH
msoft_code	INT_SUCCESS
phard_code	UNKNOWN
Verbiage	USER ADDED

Ok

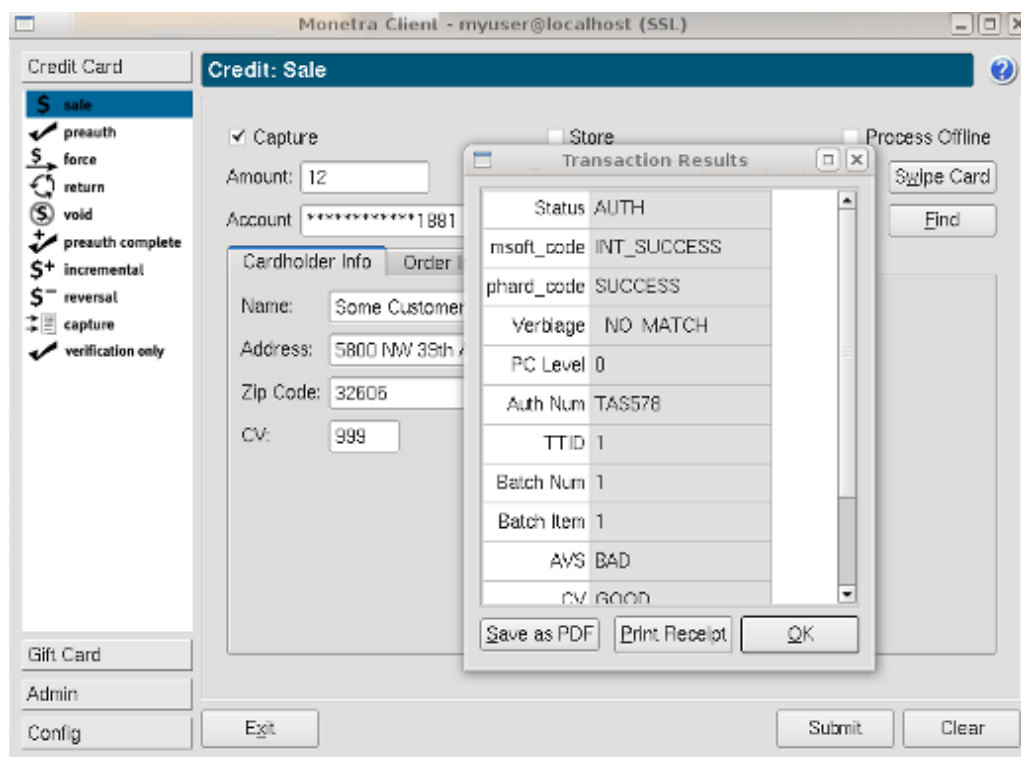
## Testing the setup

### Running an Authorization

- Log into the Monetra Client GUI, this is going to be identical to how you created a profile and logged into the Monetra Administrator with the exception that you will use the username and password you created in the previous step. Please note you cannot log in with the MADMIN user to the Monetra Client.

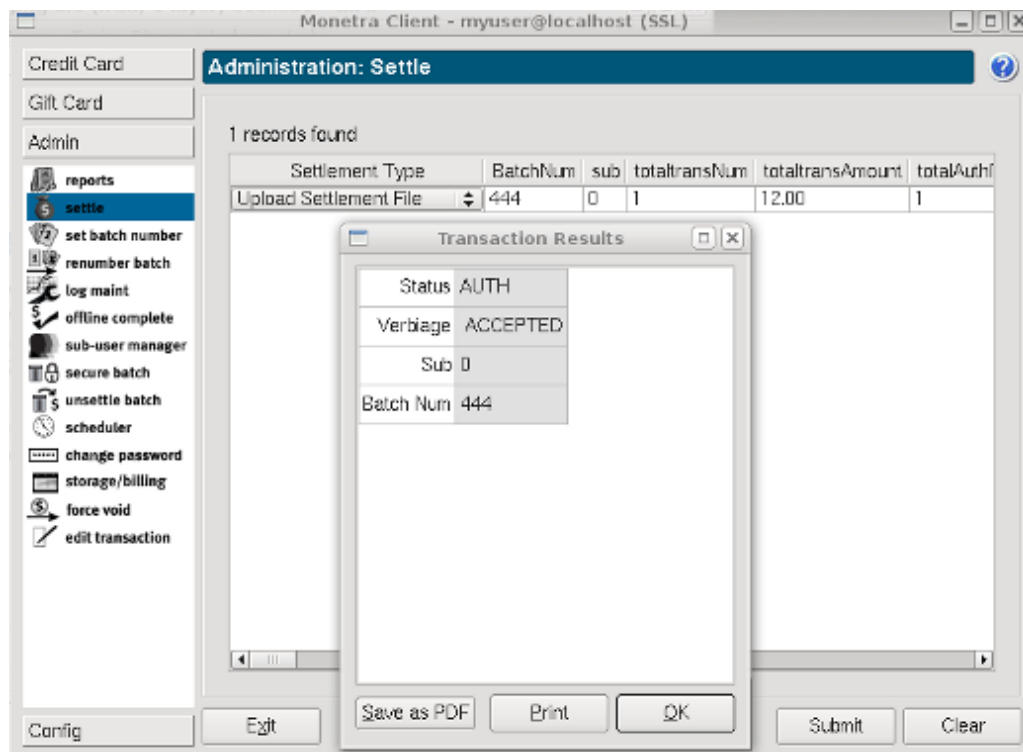


- Assuming you added an account which can process credit cards, go to Credit Card->Sale and run a transaction.
- If you are using the Monetra Loopback Emulator, you can use this test information:
  - Account: 401288888881881 Exp 0512
  - Amount: 12.00
  - Street: 5800 NW 39th AVE STE 104
  - Zip: 32606
  - CV: 999
- Submit and you should receive an approval, if not, contact support.



### Settling a Batch

- In the Monetra Client, go to Admin->Settle
- You should see a single batch with a single transaction, the test transaction you ran in the previous step.
- In the drop-down next to the batch, select the 'Upload' option then submit
- The settlement should be successful...



## Attachments

- [offline\\_package.png](#) (366.5 KB) - added by *brad* 17 months ago. "Generation of an Offline Package"
- [generate\\_db\\_key.jpg](#) (8.2 KB) - added by *brad* 17 months ago. "Generate Database Encryption Key"
- [installer\\_install.png](#) (121.4 KB) - added by *brad* 17 months ago. "Installer Installation"
- [manager\\_processor.png](#) (62.8 KB) - added by *brad* 17 months ago. "Manager -- Processor Config"
- [manager\\_modem.png](#) (51.8 KB) - added by *brad* 17 months ago. "Manager -- Modem Config"
- [manager\\_start.png](#) (69.7 KB) - added by *brad* 17 months ago. "Manager -- Start Monetra"
- [admin\\_login.png](#) (43.3 KB) - added by *brad* 17 months ago. "Admin -- Login Window"
- [admin\\_password.png](#) (48.3 KB) - added by *brad* 17 months ago. "Admin -- Change Password"
- [admin\\_adduser.png](#) (82.2 KB) - added by *brad* 17 months ago. "Admin -- Add User"
- [client\\_login.png](#) (46.2 KB) - added by *brad* 17 months ago. "Client -- Login"
- [client\\_sale.png](#) (62.6 KB) - added by *brad* 17 months ago. "Client -- Sale"
- [client\\_settle.png](#) (56.4 KB) - added by *brad* 17 months ago. "Client -- Settle"
- [installer\\_4packages.2.png](#) (80.7 KB) - added by *brad* 17 months ago. "Installer -- 4 packages"
- [installer\\_4packages.png](#) (80.7 KB) - added by *brad* 17 months ago. "Installer -- 4 packages"
- [installer\\_licenses.png](#) (133.0 KB) - added by *brad* 17 months ago. "Installer -- license list"
- [installer\\_badosarch.png](#) (29.7 KB) - added by *brad* 17 months ago. "Installer -- OS or Architecture mismatch"
- [putty\\_tunnel.png](#) (141.2 KB) - added by *brad* 12 months ago.