Perpetual Licensing

Failsafe, Reset Free
Perpetual licensing was created in response to customer requests for BASIS to provide a more secure and trouble-free licensing solution. It also addressed the needs of banks and other institutions who voiced concerns about their requirements to meet Sarbanes–Oxley compliance. This failsafe licensing is available regardless of whether software maintenance coverage (SAM) is active or not and also removes the administrative and cost burden of manual resets for the end-user, the reseller/partner, and BASIS. Failsafe licensing requires that the server hosting the BASIS License Manager (BLM) or BASIS License Service (BLS) have an **outgoing** port to access a single BASIS licensing server. This solution meets the needs of our customers who require a modern, secure and robust licensing solution. Additionally, moving to the new failsafe perpetual license has no cost and does not require active SAM coverage.

Tried and tested with Virtual Licensing
Using the same technology and a similar algorithm that BASIS has employed since 2010 to support thousands of virtual machines that refresh the license daily, the BLM/BLS automatically refreshes the new perpetual license monthly, or dynamically whenever an environment change invalidates the license.

BASIS License Manager Location
The BLM/BLS is a lightweight service that can either be run on the same server that houses the BASIS application or it can be installed on a different server. Any of the BASIS supported operating systems can be employed to host the BLM/BLS.

Auto-Refresh Failover Timing Details
At regular monthly intervals determined by the date of any feature line on the license, the BLM/BLS validates the failsafe functions of the perpetual license by automatically retrieving a fresh perpetual license.

Alert Monitoring
In the unlikely event that the connection is unsuccessful, the failsafe capability is compromised. The BLM/BLS will continue attempting to "heal" itself at more and more frequent intervals. BASIS proactively monitors incoming connections from the BLM/BLS and will automatically alert the customer should an expected connection not materialize. The license continues to function for a period of time in non-failsafe mode while it attempts to reconnect to the BASIS license server, generally for a minimum of twenty (20) days, but its failsafe

properties are no longer functional. During this time BASIS will automatically continue, at ever more frequent intervals, to alert the customer to the issue and provide remedial steps to restore the license to its functioning failsafe state.

Technical Connection Details

The perpetual license is secure since it uses the <u>outgoing-only</u> port 80, or the encrypted port 443, to retrieve a license from a named BASIS license server machine. The license file, a text file, is requested by the BLM/BLS and delivered over the same connection *without* the requirement of opening inbound traffic to port 80 or the encrypted port 443. Generally, it's enough to simply open the outbound port 80, or the encrypted port 443, because stateful firewalls, which are better at identifying unauthorized and forged communications, are smart enough to only allow the license text requested through the port, be returned through the port, on the outbound connection. And naturally, if the license text is corrupted in any way, the relicensing process will immediately fail.

Proxy Server Considerations

In order for perpetual licenses to work, the system that is running the BLM/BLS must be able to connect to license.poweredbybbj.com via port 80, or the encrypted port 443, in order to update the license. If this is only possible via the use of a proxy server, the BLM/BLS will need to be configured to use the proxy server. This can be done under Unix platforms by placing a script called `getlicense` in the BLM/BLS directory. If the BLM/BLS directory contains a file called `getlicense`, the BLM/BLS will execute it before trying to directly connect to `license.poweredbybbj.com`. If the program in the `getlicense` file writes a license to standard output, the BLM/BLS will accept that as the new license.

If you require the proxy server to supply a program or script, this will allow you to direct the download through the proxy server. Here is a sample `getlicense` script that duplicates the existing BLM/BLS behavior:

```
#!/bin/sh
exec wget -q -O - http://license.poweredbybbj.com$1
```

Alternatively, you can use curl, here is an example using curl for the getlicense script:

```
#set -x
curl   --silent --show-error http://license.poweredbybbj.com$1
```

The Windows BLM/BLS will use a Proxy server if the user that runs the BLM/BLS process is a user that has been configured to use a Proxy Server when using Internet Explorer. This can be done by configuring the proxy settings in either IE or the Windows control panel when logged in to the machine as the chosen user. Any port specifics would be done at the IE or Control panel Proxy Configuration screens.

Once you have a user that is configured to use the Proxy server, you need to then configure the BLM/BLS to use that user account when running the BLM/BLS from Windows Services. This is done through the Log On tab from the BASIS License Manager's Properties page.
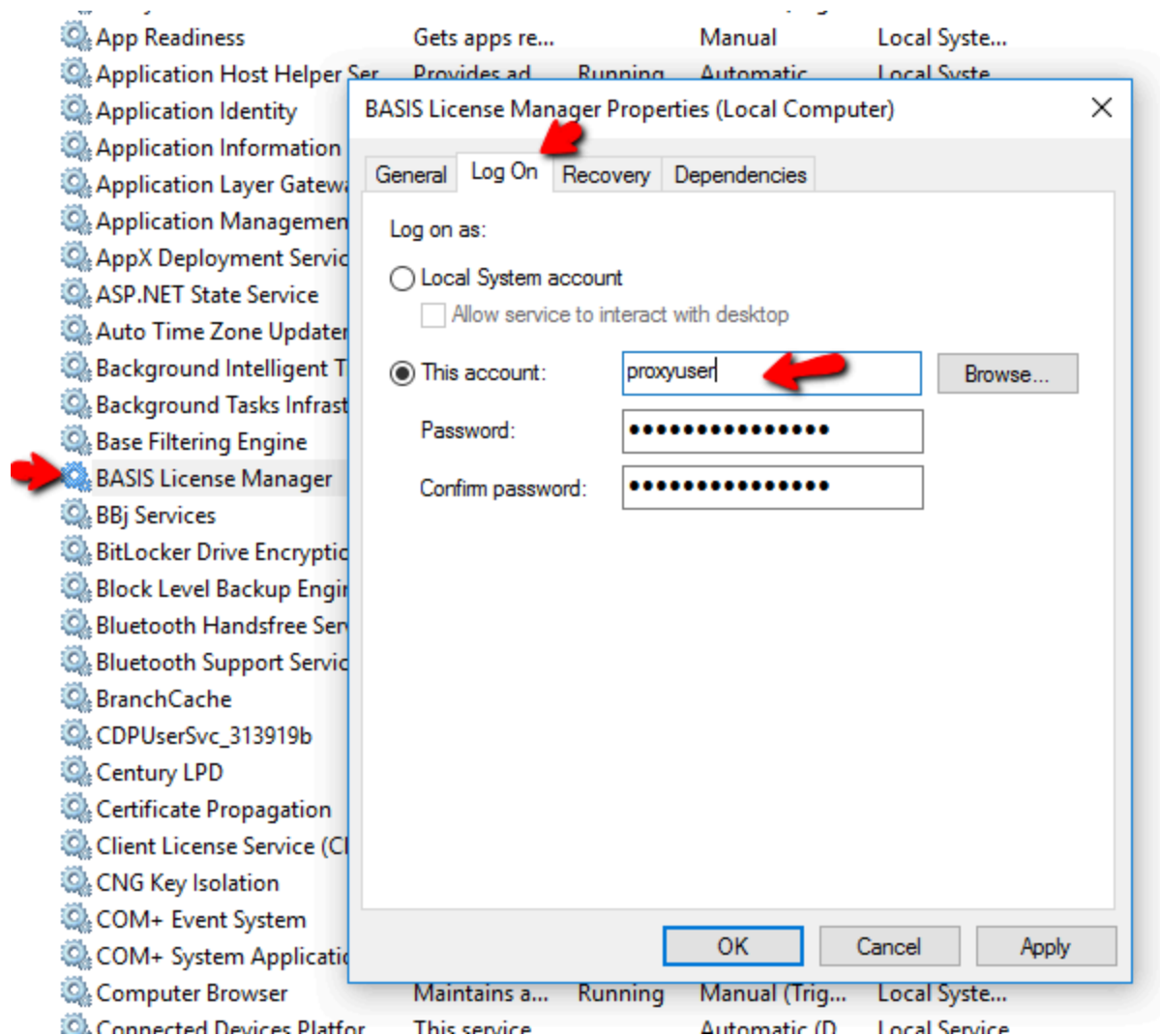
Firewall Considerations

To accommodate servers locked down behind a firewall, an outbound exception for the IP address of `license.poweredbybbj.com` needs to be added to enable connecting to BASIS. Once you have placed the script in the BLM/BLS directory, you can test the auto re-licensing using the following VERB executed from the language command prompt ">":

      UPDATELIC

Secure Outbound Port Usage

For those requiring an even higher security level, the outgoing-only TCP secure port 443 can be used by taking the same approach as with the proxy server above, except replacing `http` with

https. To configure a Unix-based BLM/BLS to use https on port 443 rather than http on port 80 place a file named `getlicense` in the BLM/BLS directory that contains the following:

```
#!/bin/sh
exec wget -q -O - https://license.poweredbybbj.com$1
```

And for curl:

```
#set -x
curl   --silent --show-error https://license.poweredbybbj.com$1
```