SpiderView 1.5.13
Support for
Spider Device Firmware 3.x and 4.x

21 August 21st, 2019

SpiderView 1.5.x User-Visible Changes

- SpiderView 1.5 works with both Firmware 4.x (TLSv1.2) and Firmware 3.x (TLSv1.0) using "Forced KVM Encryption"
- If you don't find any new devices when you search, you're now advised to check your Network Adapter choice since the wrong Adapter choice won't let you discover your devices.

Trouble shooting

Can't Find Devices -- Network Adapter Choice

If you don't find any new devices when you search, check your Network Adapter choice since the wrong Adapter choice won't let you discover your devices.

You must select the correct Network Adapter or "Find New Devices" won't find any devices. This is under Configuration | Options. Note: this may happen if your Windows PC becomes disconnected from the Ethernet and the default Network Adapter address changes to a "link-local IPv4 address" (e.g., 169.254.x.x) per RFC 3927. If no Devices are found, SpiderView will advise you to check the network settings.

Spider Disappears

You can change the "IP auto config" of a Spider device using SpiderView. Switching between DHCP and "None" may change your Spider device's IP address.

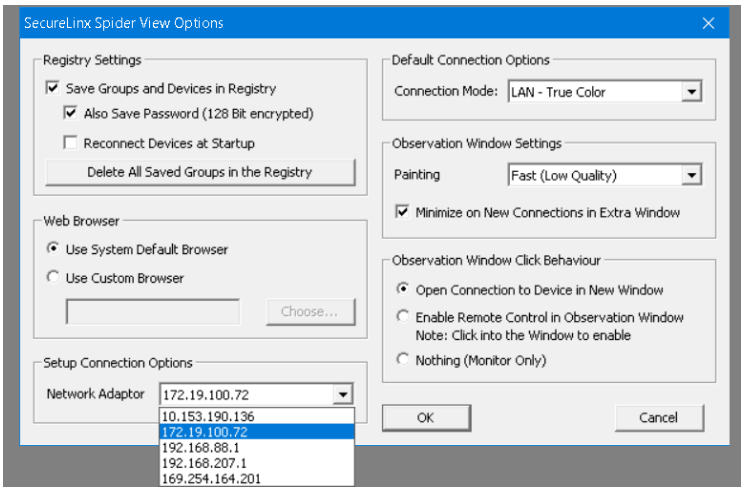

Figure 1 Select SpiderView's Network Adapter

Insecure HTTPS (Self-signed certificate)

If you chose "Configure Selected Device (Website)" which opens a Web Browser, the Browser is likely to complain because the Spider contains a *self-signed security certificate*. You may "click through" the warnings and proceed to the Spider's website.

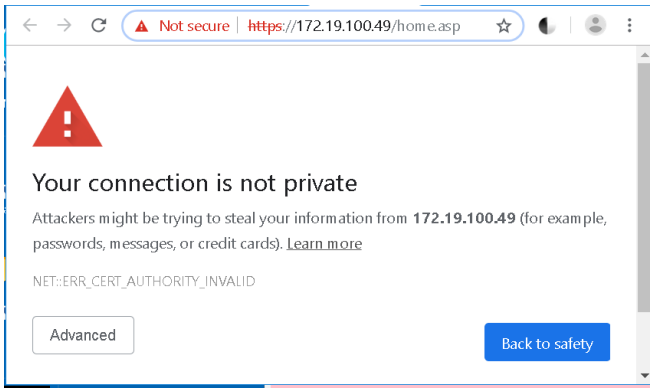

Figure 2 One popular Browser's security warning

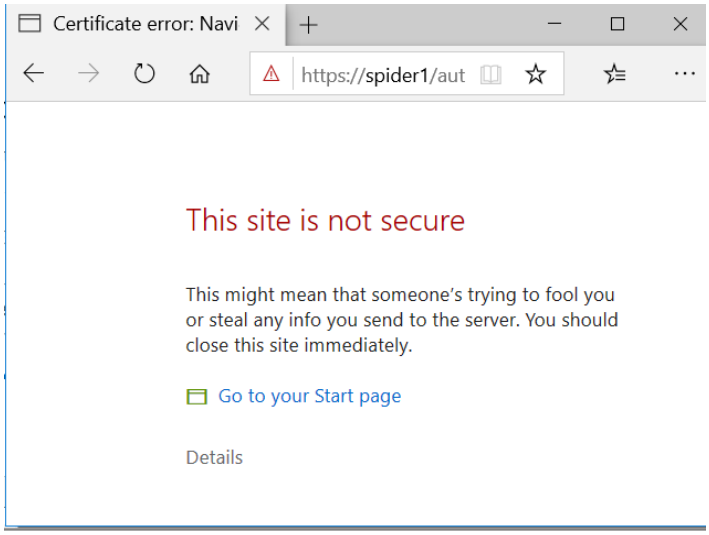

Figure 3 Another Browser's security warning

Sharing a Disk

When sharing a disk, it may take ~15 seconds to appear on the remote Server.

If you "Reset Keyboard/Mouse (USB)" using the Web interface (Maintenance | Reset Operations | Reset Keyboard/Mouse (USB)) you will drop your Redirected Drives, too.

Technical Notes Follow

Technical Notes

SpiderView 1.5 Release Notes

- SpiderView 1.5 uses **TLSv1.2** protocol with **Spider Firmware 4.0.x**[1] for KVM Encryption
- SpiderView 1.5 uses TLSv1.2 protocol for HTTPS secure login. (Previously SSLv3)
- SpiderView 1.5 uses OpenSSL 1.0.2. Previously it had used 0.9.6. This tracks Firmware 4.0 update from OpenSSL 0.9.6 to 1.0.2. This supports TLSv1.2 traffic.
- SpiderView 1.5 is built on Win10 system with MSVC 2019

SpiderView 1.5.1 Release Notes

- SpiderView 1.5.1 contains fixes for certain crashes.
- "SSL" changed to "TLS" in popup error dialogs.

SpiderView 1.5.2 Release Notes

- SpiderView 1.5.2 Installer now installs MSVC redistributable DLLs. This supports Windows 7. (Older version 1.3 worked on Windows 7 too.)

SpiderView 1.5.3 Release Notes

- Enabled "Search for New Devices" in Toolbar and "Find New Devices" under Configuration Menu. This finds Spiders running either FW 3.x or 4.x. Disabled IPMI from Toolbar. Increased number of Network Adapters in device search to 16.

SpiderView 1.5.4 Release Notes

- Updated this doc to include Network Adapter selection under Configuration | Options for discovery.

SpiderView 1.5.5 Release Notes

- Added an advisory popup dialog to check Network Adapter. Dialog is shown if no new devices are found when trying to find them.

SpiderView 1.5.10 Release Notes

Fixed a crash. (Sequence to generate crash*: open Observ, open Ctl, close Ctl, Close Observ *crash**) or (*open Observ, open Ctl, close Observ, Close Ctl *crash**)

SpiderView 1.5.11 Release Notes

When no New Devices are found, an Advisory dialog is shown (saying, "check your network adapter") and then the Configure | Options dialog is shown. This latter dialog is where the network adapter is chosen.

So, on the First Run, you're asked if you want to Find New Devices. If you do, or if you manually choose to Find New Devices, continue with Device discovery as before. If you don't find any Devices in this (or

[1] "KVM Forced Encryption" works.

subsequent) searches, you are advised to check your network-adapter (as of 1.5.5) but now the program raises the Options dialog for you.

SpiderView 1.5.12 Release Notes

Fixed crash when Redirected Drive has no username or no password. A dialog warns user of required fields.

SpiderView 1.5.3 Release Notes

Fixed problem during very first run when NIC could not be chosen, preventing Device discovery.

Security Notes

Forced KVM Encryption

When a Spider device is configured to use "Forced KVM Encryption":

To talk to Spider Firmware **4.0.x**, use **HTML5** or **SpiderView 1.5**. This uses TLSv1.2

HTML5 uses Cipher Suite: TLS_RSA_WITH_AES_128_GCM_SHA256 (0x009c)
SpiderView uses Cipher Suite: TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d)

To talk to Spider Firmware **3.0.2,** use the **Java applet**. (No version of SpiderView works.) This uses SSLv3.

The applet uses Cipher Suite: TLS_RSA_WITH_AES_128_CBC_SHA (0x002f)

HTTPS Secure Login (distinct from KVM Encryption)

Secure login authentication ("HTTPS") to a Spider is separate from the encryption used to send KVM data. The following describes HTTPS. This information was collected using command-line:

```
OpenSSL.exe s_client -connect spider1:443
```

You could also observe it with Wireshark[2].

For **HTTPS** to **FW 4.0.x**:

```
Protocol  : TLSv1.2
Cipher    : DHE-RSA-AES256-GCM-SHA384
Peer signing digest: SHA256
```

[2] Note: if KVM Encryption is off, Wireshark will display KVM packets (incorrectly) as "SSL" but they are not encrypted.

```
Peer signature type: RSA
Server Temp Key: DH, 2048 bits
Server public key is 1024 bit
```

Wireshark: TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d)

For **HTTPS** to **FW 3.0.x**:

```
Protocol  : TLSv1
Cipher    : AES256-SHA
New, SSLv3, Cipher is AES256-SHA
Server public key is 1024 bit
```

Wireshark: TLSv1 Cipher Suite: TLS_RSA_WITH_AES_256_CBC_SHA (0x0035)

Spider device Certificate

The Spider authenticates to a client (e.g. HTTPS browser, or SpiderView) with a self-signed certificate:

```
Certificate chain
 0 s:C = US, ST = California, L = Irvine, CN = SLS, O = Lantronix
   i:C = US, ST = California, L = Irvine, CN = SLS, O = Lantronix
```