

IS-SPX-1000 Boot Loader Upgrade Procedure

This Boot Loader upgrade corrects an issue with the IS-SPX-1000 that can cause the player to go into recovery mode. AMX recommends that any player running a Boot Loader prior to build 13427 of version 1.1.4 be upgraded according to the procedures outlined in this documentation.

Instructions 10 and 11 of this document provide instructions that can be used to determine the Boot Loader revision of a particular player.

It is imperative that all instructions contained in this documentation be carried out as described. Failure to do so can result in unpredictable player behavior.

Boot Loader and Player Firmware PKG Update

Note: If you are not in the same location as the player and are doing the following update over the network it is advised to have someone at the player site in the event something abnormal occurs.

The following process will update the SPX-1000 to the updated Boot Loader and as well as to the current player firmware image. The complete process is required to successfully update the player. The firmware pkg image will reset all custom settings to the default for the player.

Therefore, note the current custom settings on the player so they can be re-applied after the player image update is complete.

Some of these settings include:

- Network Settings
 - DHCP or Static
 - IP address if addressing is static
 - Device name is serial number
 - Multiscreen ID is serial number
 - Network API
 - Disabled
 - Proxy Settings
 - None
- Display Setting
 - VGA
 - Audio Output
 - Disabled
 - Interactivity
 - Disabled
- Media Sources
 - Local Storage
- RS232
 - Disabled
 - Imported Protocol files removed
 - Ensure the original protocol files are available to be re-input.
- Pull Mode
 - Disabled

Maintaining static IP addresses following the upgrade process

The IS-SPX-1000 defaults to DHCP when initializing the IP address of the player. If you need the IS-SPX-1000 to use a static IP address after a Firmware re-install from the recovery console, follow the procedure below:

- Do not reboot at the end of the installation process.
- Open the Diagnostic page
- Go to the bottom of the page, under the Change Configuration section
- Set the IP configuration and press the Set change button
- Reboot the device

Use the static IP address `ipaddr` with the netmask `mask`, broadcast address `brd` (automatically derived if left empty), optional gateway `gw` and optional DNS servers `dns1`, `dns2` and `dns3`. All fields must be in dotted quad form.

The syntax is `static` followed by an equal sign and a value string.

```
static=ipaddr;mask;brd[;gw[;dns1;dns2;dns3]]
```

An example configuration is:

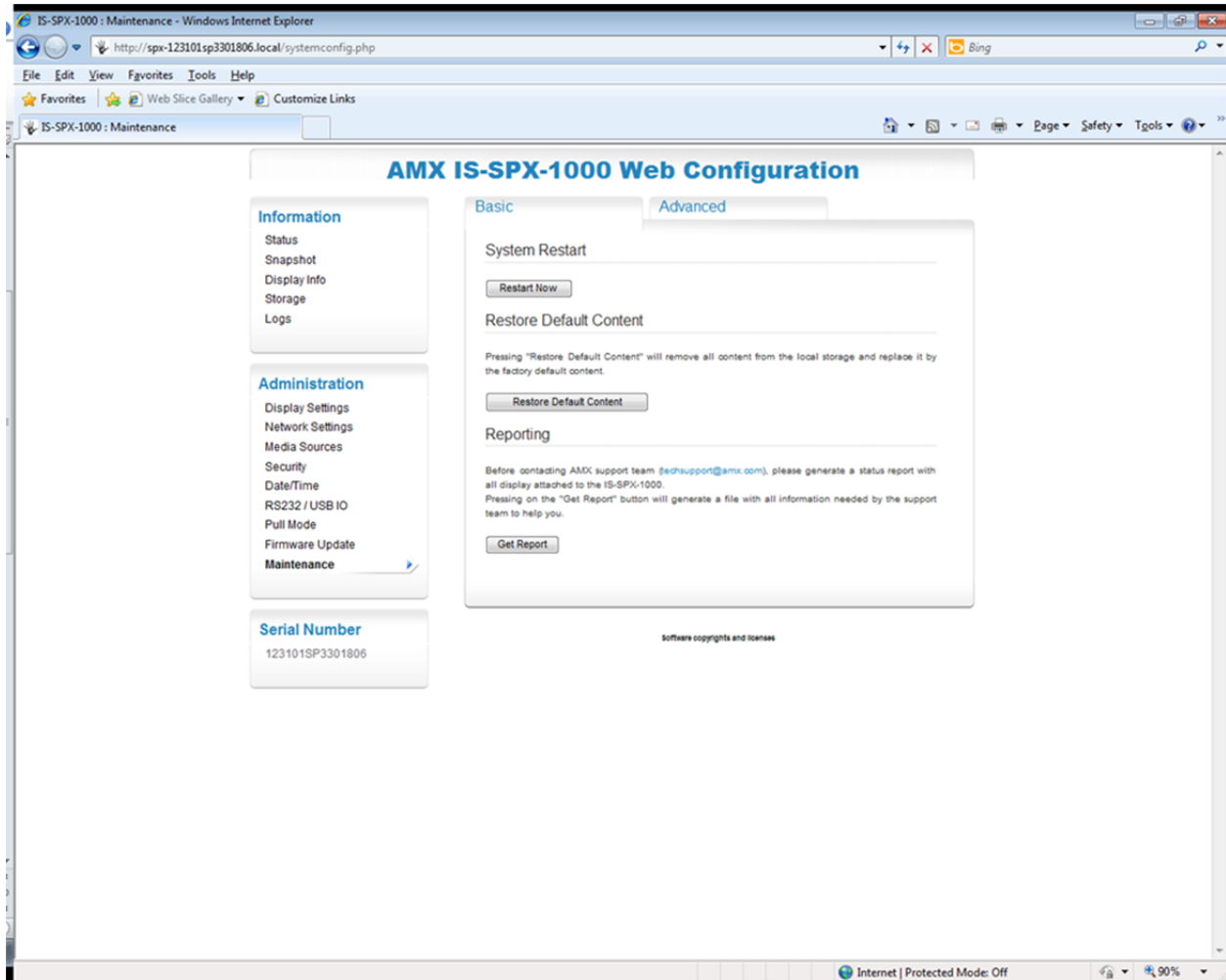
- `static=192.168.1.100;255.255.255.0;;192.168.1.1;192.168.5.1;192.168.5.2`

Boot Loader Update

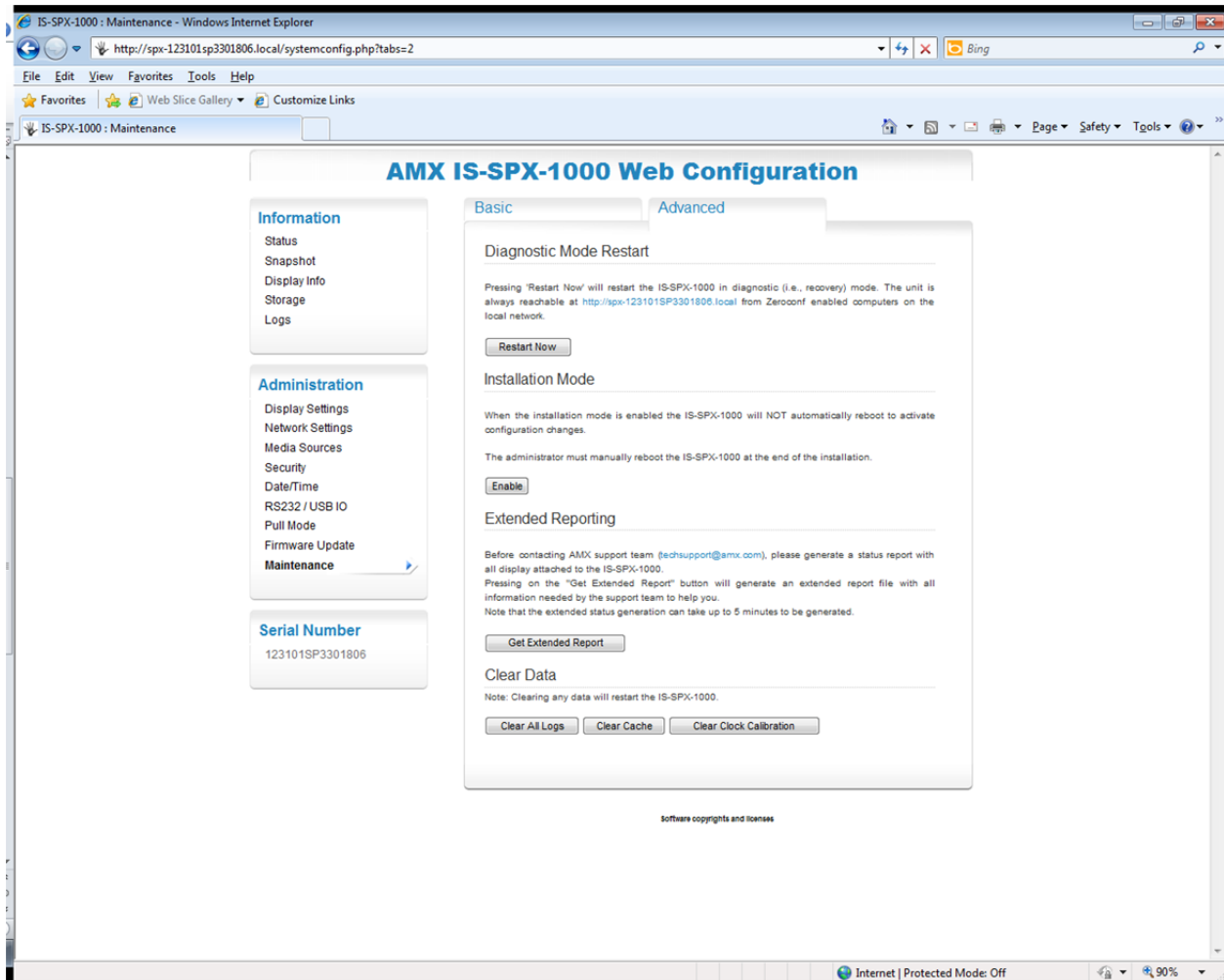
1. Bring up Web Configuration tool for target player:



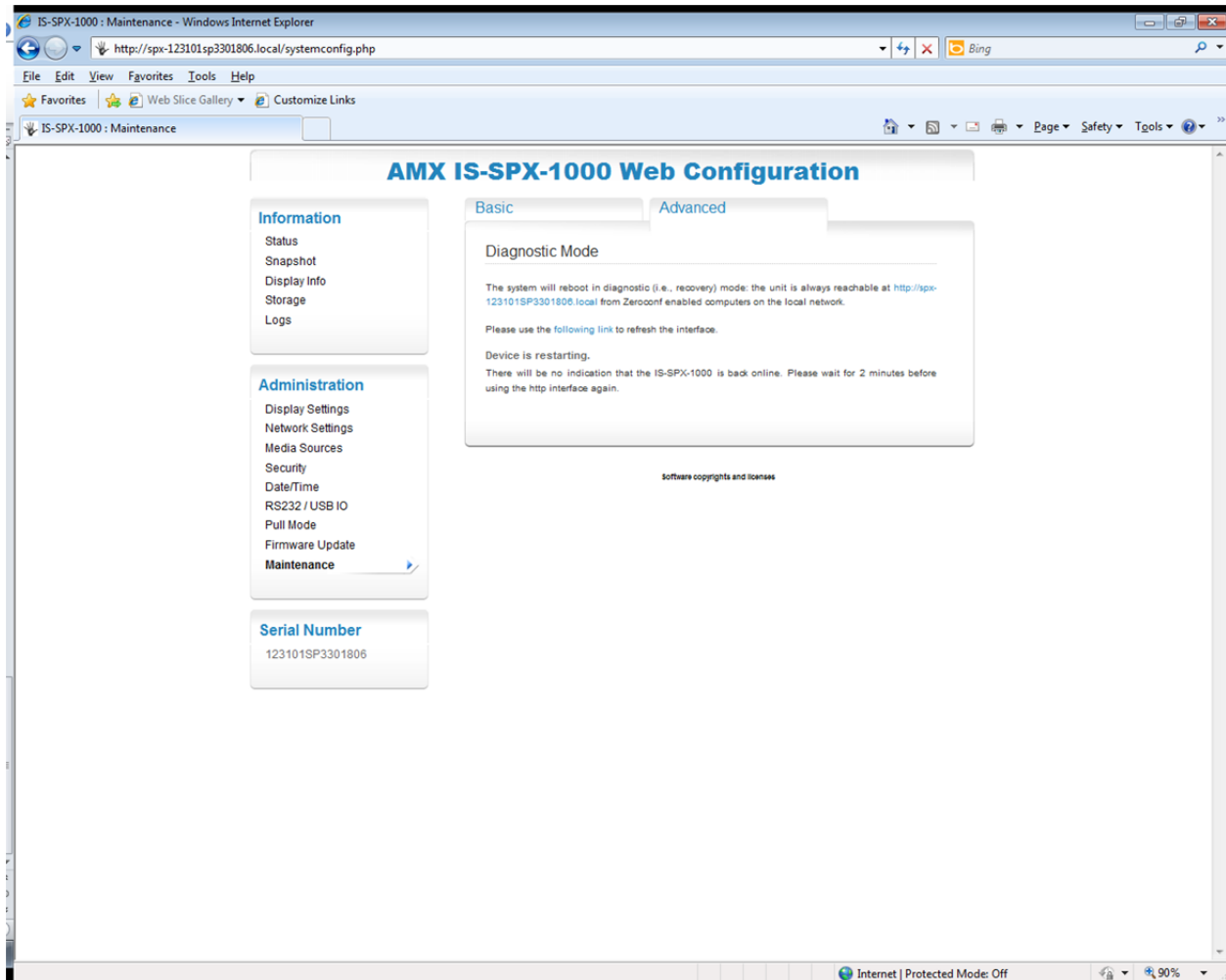
2. Select Maintenance:



3. Select the Advanced tab.
4. Select "Restart Now" button:

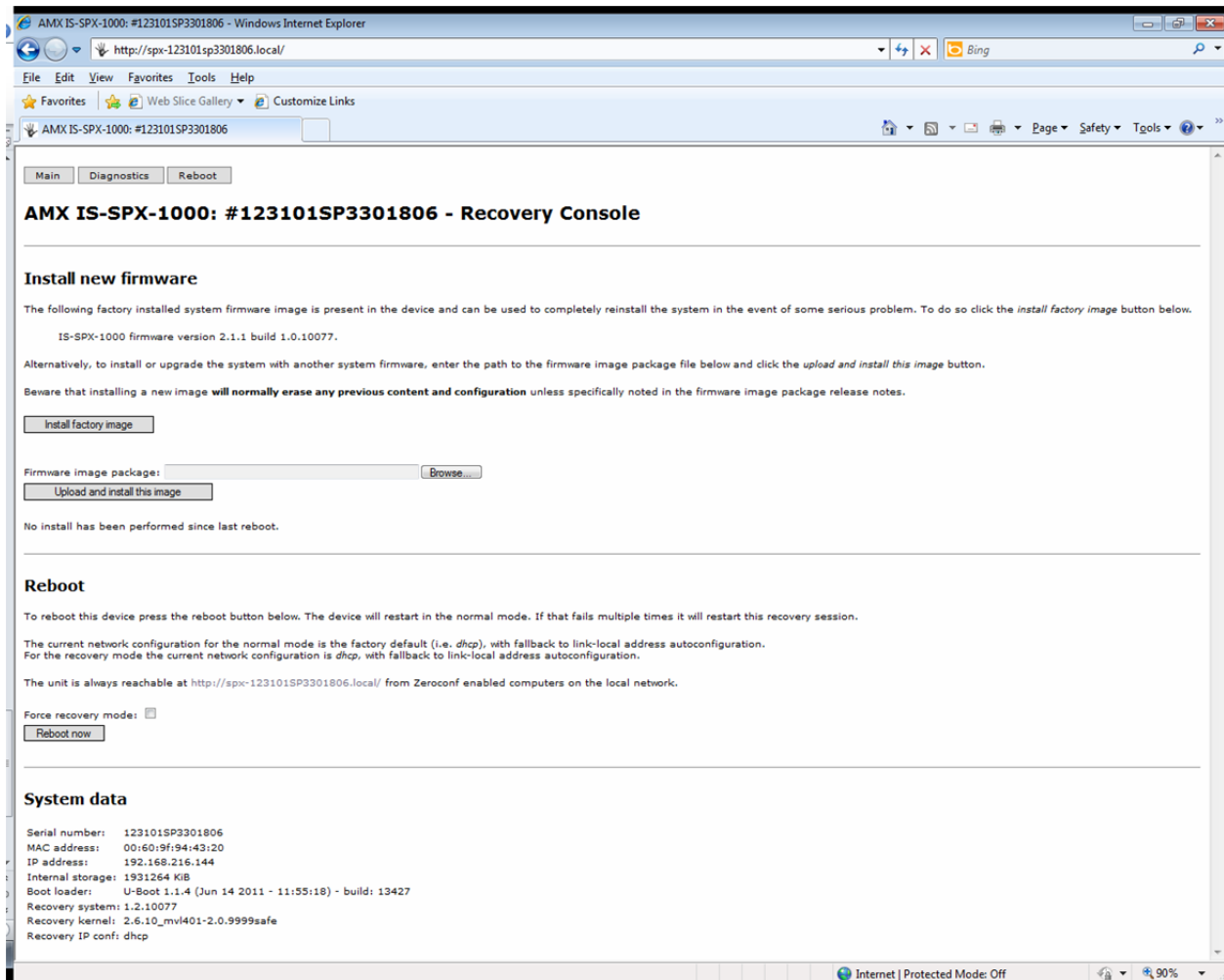


5. Select “following link” in “Please use the following link to refresh the interface”.

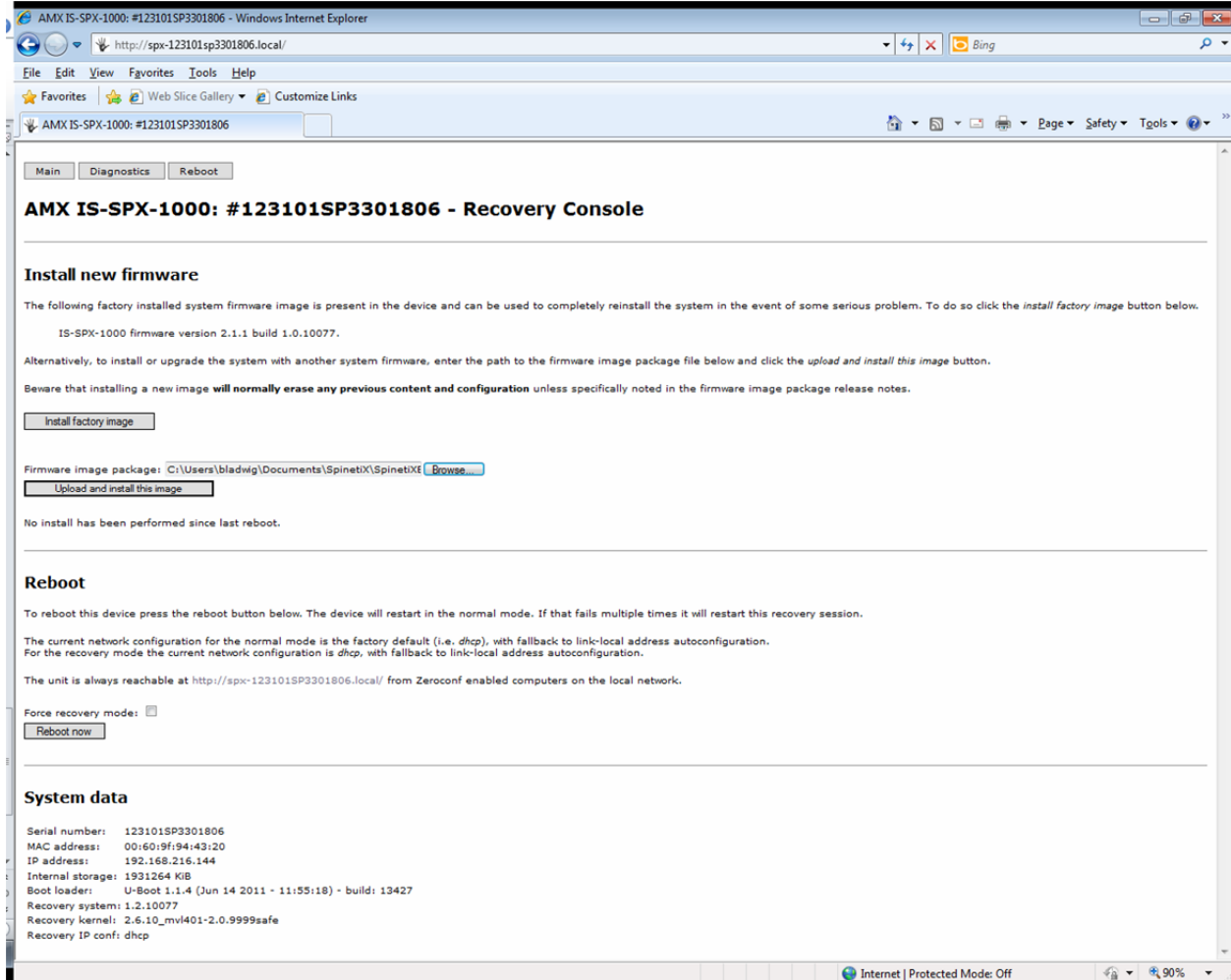


6. Using the Browse button, browse to the location where the Boot Loader .pkg file is stored on your computer and select the file.

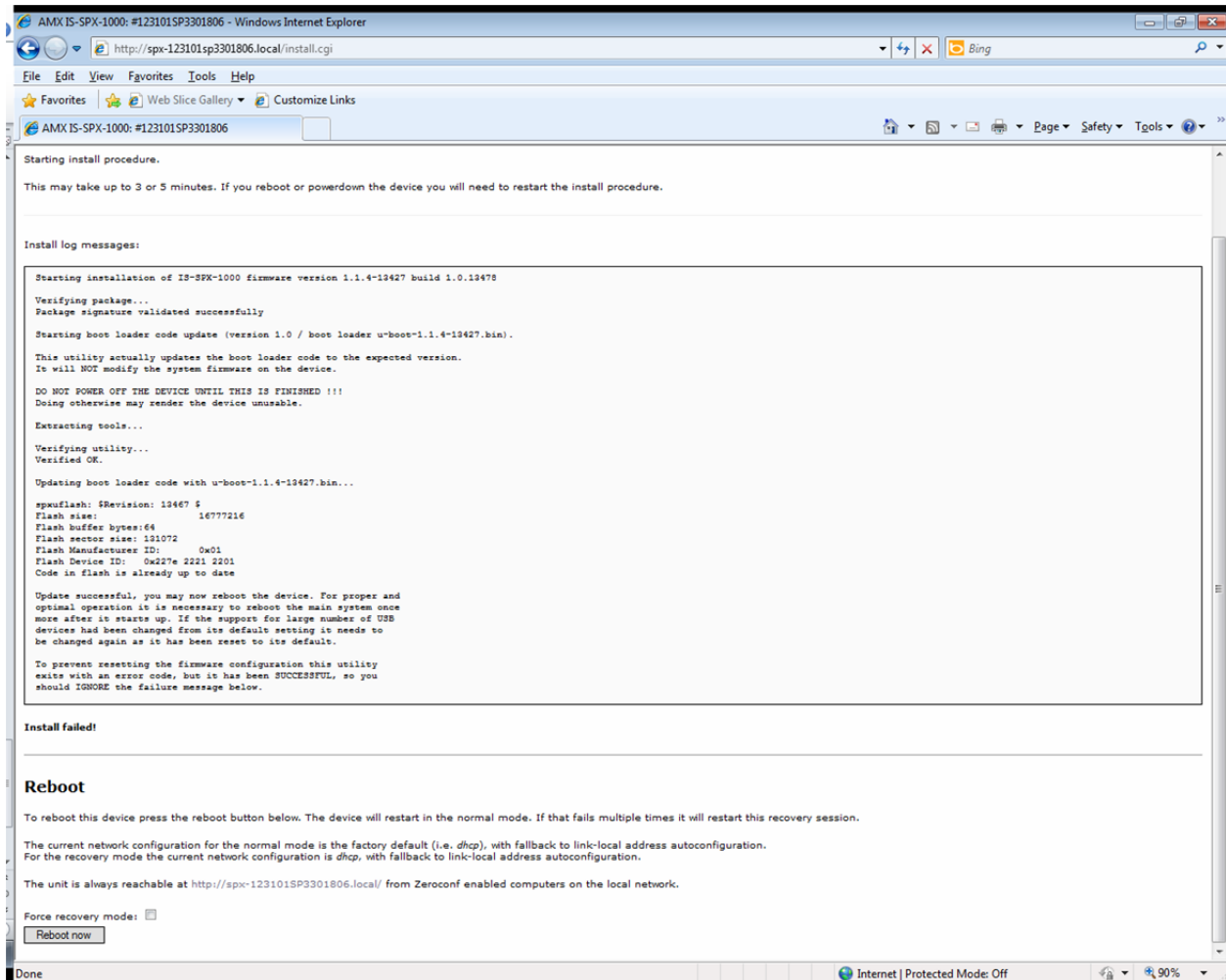
- is-spx-1000-boot-update-1.1.4-13427.pkg



7. Select the “Upload and Install this image button”



The image installation will proceed as shown below.

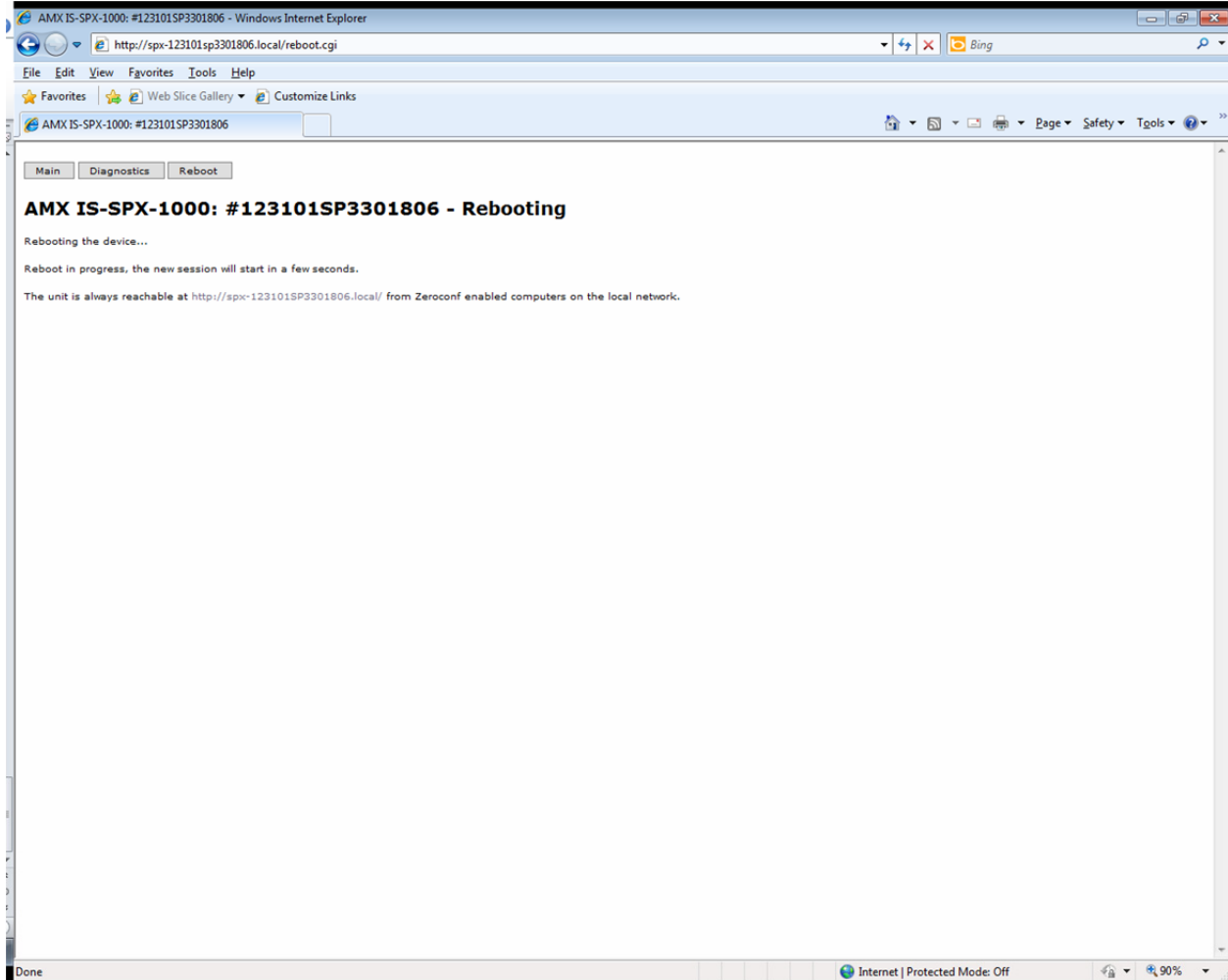


Even though the message Install failed shows, in the install log message area, it does say the following to indicate success.

Update successful, you may now reboot the device. For proper and optimal operation it is necessary to reboot the main system once more after it starts up. If the support for large number of USB devices had been changed from its default setting it needs to be changed again as it has been reset to its default.

To prevent resetting the firmware configuration this utility exits with an error code, but it has been SUCCESSFUL, so you should IGNORE the failure message below.

8. Press Reboot now button

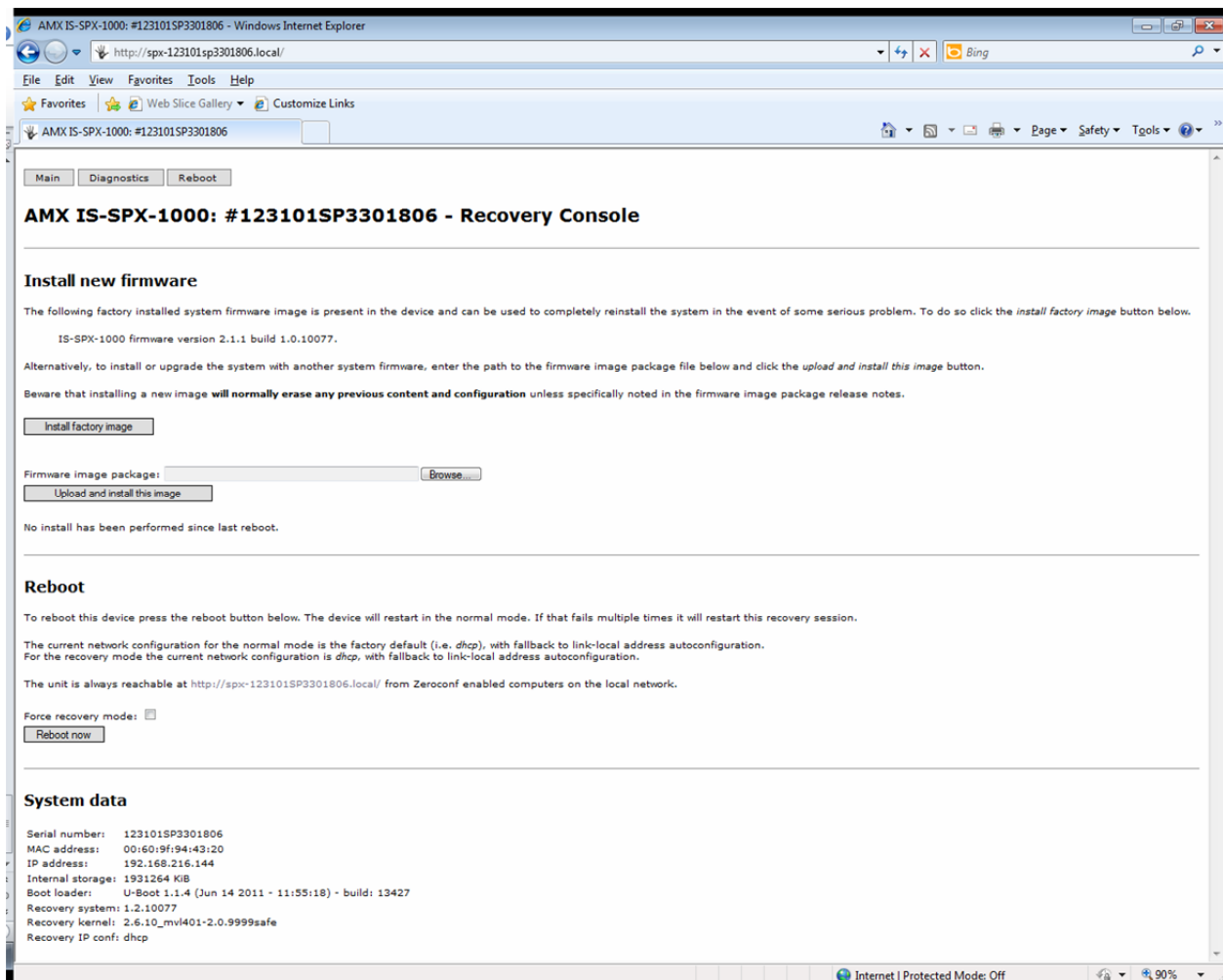


9. After player reboots, select the <http://spx-123101SP3301806.local/> link on the above page or from a Zeroconf enabled computer.



10. Return to Recovery console to verify Boot Loader is installed.

- Select Maintenance
- Select Advanced tab
- Select Restart Now button under Advanced
- Select "following link" in Please use the following link to refresh the interface.



11. Look under System data section for verification that player contains updated boot loader.

- Boot loader: U-Boot 1.1.4 (Jun 14 2011 - 11:55:18) - build: 13427

12. Using the Browse button on the Recovery Console page, browse to the location where the player firmware Pkg file is stored on your computer and select the file.

- prod-fs-amx.is-spx-1000-2.2.1-1.0.13246.pkg

13. Select the “Upload and Install this image button”

The screenshot shows a Windows Internet Explorer browser window displaying the AMX IS-SPX-1000 Recovery Console. The address bar shows the URL `http://spx-123101sp3301806.local/`. The page has a navigation bar with buttons for **Main**, **Diagnostics**, and **Reboot**. The main content area is titled **AMX IS-SPX-1000: #123101SP3301806 - Recovery Console**.

Install new firmware

The following factory installed system firmware image is present in the device and can be used to completely reinstall the system in the event of some serious problem. To do so click the *install factory image* button below.

IS-SPX-1000 firmware version 2.1.1 build 1.0.10077.

Alternatively, to install or upgrade the system with another system firmware, enter the path to the firmware image package file below and click the *upload and install this image* button.

Beware that installing a new image **will normally erase any previous content and configuration** unless specifically noted in the firmware image package release notes.

Firmware image package: `C:\Users\bladwig\Documents\Ironbark\AMX Firm`

No install has been performed since last reboot.

Reboot

To reboot this device press the reboot button below. The device will restart in the normal mode. If that fails multiple times it will restart this recovery session.

The current network configuration for the normal mode is the factory default (i.e. *dhcp*), with fallback to link-local address autoconfiguration.
For the recovery mode the current network configuration is *dhcp*, with fallback to link-local address autoconfiguration.

The unit is always reachable at `http://spx-123101SP3301806.local/` from Zeroconf enabled computers on the local network.

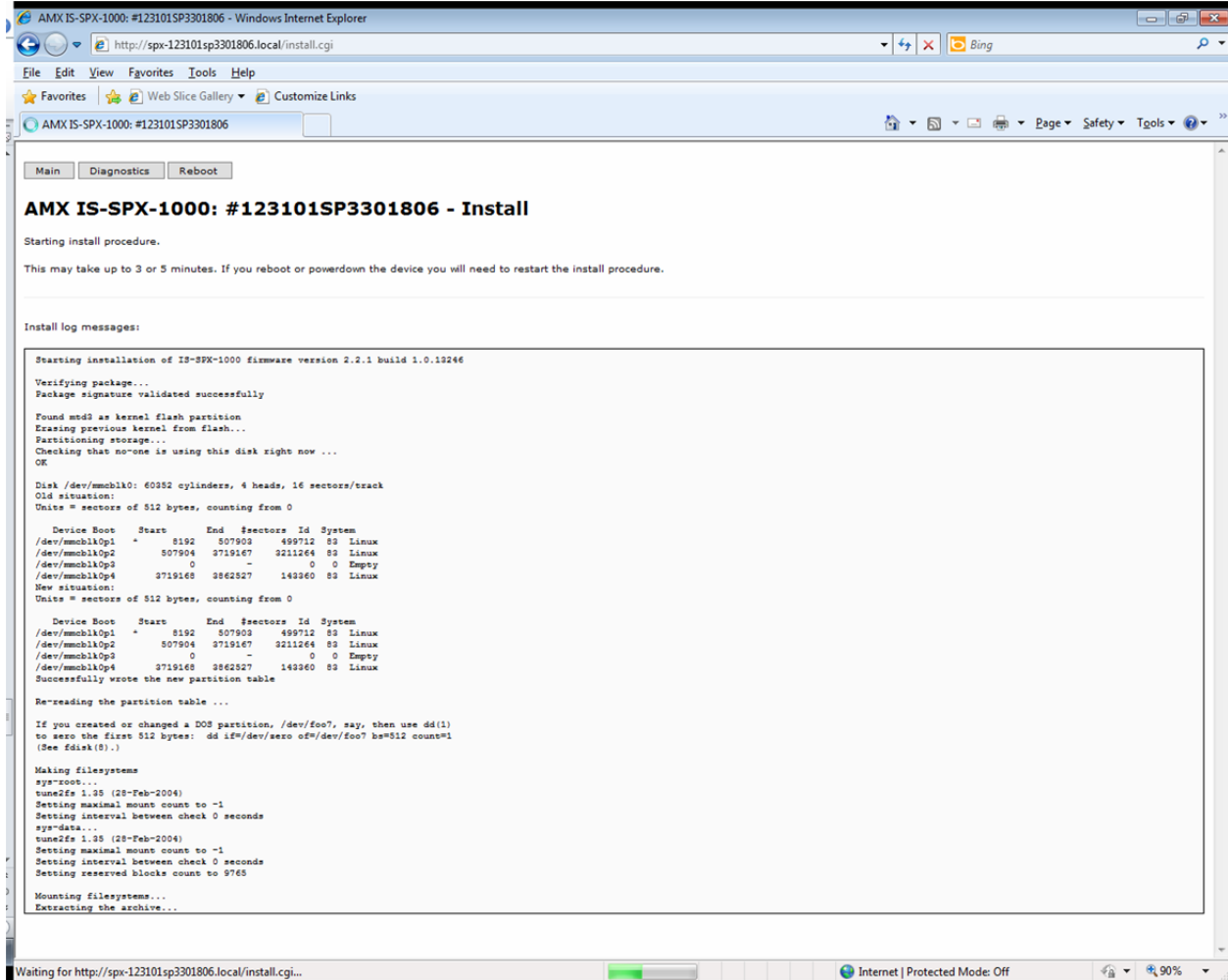
Force recovery mode: ☐

System data

Serial number: 123101SP3301806
MAC address: 00:60:9f:94:43:20
IP address: 192.168.216.144
Internal storage: 1931264 KiB
Boot loader: U-Boot 1.1.4 (Jun 14 2011 - 11:55:18) - build: 13427
Recovery system: 1.2.10077
Recovery kernel: 2.6.10_mvl401-2.0.9999safe
Recovery IP conf: dhcp

The bottom status bar shows "Internet | Protected Mode: Off" and a zoom level of 90%.

14. The screen you will see while re-imaging is taking place:



15. Select the Reboot Now button (after you see the Install successful message).

AMX IS-SPX-1000: #123101SP3301806 - Windows Internet Explorer

http://spk-123101sp3301806.local/install.cgi

File Edit View Favorites Tools Help

AMX IS-SPX-1000: #123101SP3301806

```
/dev/mmcblkOp4 2719168 2862527 142260 80 LINUX
New situation:
Units = sectors of 512 bytes, counting from 0

Device Boot Start End Sectors Id System
/dev/mmcblkOp1 * 8192 507903 499712 83 Linux
/dev/mmcblkOp2 507904 3719167 3211264 83 Linux
/dev/mmcblkOp3 0 - 0 0 Empty
/dev/mmcblkOp4 2719168 2862527 142260 80 Linux
Successfully wrote the new partition table
Re-reading the partition table ...

If you created or changed a DOS partition, /dev/foo?, say, then use dd(1)
to zero the first 512 bytes: dd if=/dev/zero of=/dev/foo? bs=512 count=1
(See fdisk(8).)

Making filesystems
sys-root...
tune2fs 1.35 (28-Feb-2004)
Setting maximal mount count to -1
Setting interval between check 0 seconds
sys-data...
tune2fs 1.35 (28-Feb-2004)
Setting maximal mount count to -1
Setting interval between check 0 seconds
Setting reserved blocks count to 9765

Mounting filesystems...
Extracting the archive...
Adjusting filesystem mount table (fstab)...
Flushing filesystems...
Resetting kernel parameters...
Unlocking flash...
Done
Erasing old environment...
Done
Writing environment to /dev/mtd1...
Done
Locking ...
Done
Successfully set kernel memory to '176128k'
Burning kernel to flash...
Flushing and unmounting filesystems...
Done.
```

Install successful.

The administrative password as well as any other stored information of the recovery console has been removed for next reboot so as to stay in sync with the newly installed firmware. Please re-configure an administrative password as soon as the main system is booted.

Reboot

To reboot this device press the reboot button below. The device will restart in the normal mode. If that fails multiple times it will restart this recovery session.

The current network configuration for the normal mode is the factory default (i.e. dhcp), with fallback to link-local address autoconfiguration.
For the recovery mode the current network configuration is dhcp, with fallback to link-local address autoconfiguration.

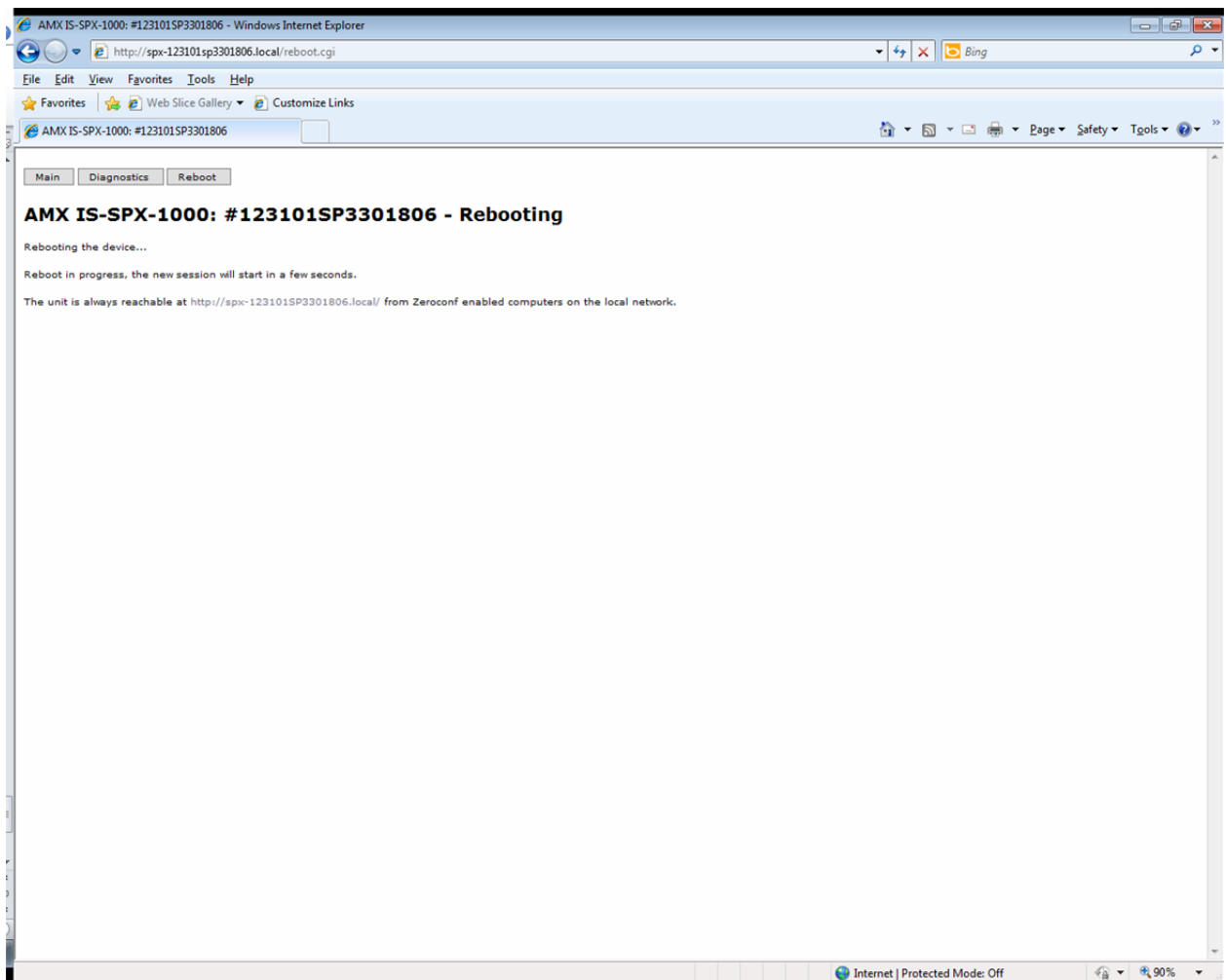
The unit is always reachable at <http://spk-123101SP3301806.local/> from Zeroconf enabled computers on the local network.

Force recovery mode: ☐

Done

Internet | Protected Mode: Off

90%



16. After player reboots, select the <http://spx-123101SP3301806.local/> link on the above page or from a Zeroconf enabled computer.

IS-SPX-1000#123101SP3301806 - Info - Windows Internet Explorer

http://spx-123101sp3301806.local/

File Edit View Favorites Tools Help

Favorites Web Slice Gallery Customize Links

IS-SPX-1000#123101SP3301806 - Info

Page Safety Tools

AMX IS-SPX-1000 Web Configuration

Information

- Status
- Snapshot
- Display Info
- Storage
- Logs

Administration

- Display Settings
- Network Settings
- Media Sources
- Security
- Date/Time
- RS232 / USB IO
- Pull Mode
- Firmware Update
- Maintenance

Serial Number

123101SP3301806



Serial Number : 123101SP3301806 (HW rev. 1.40/2.21)

Firmware : 2.2.1

IP : 192.168.210.144 (Ethernet)

Mac : 00:60:9F:94:43:20

Device name : 123101SP3301806

Multiscreen ID : 123101SP3301806

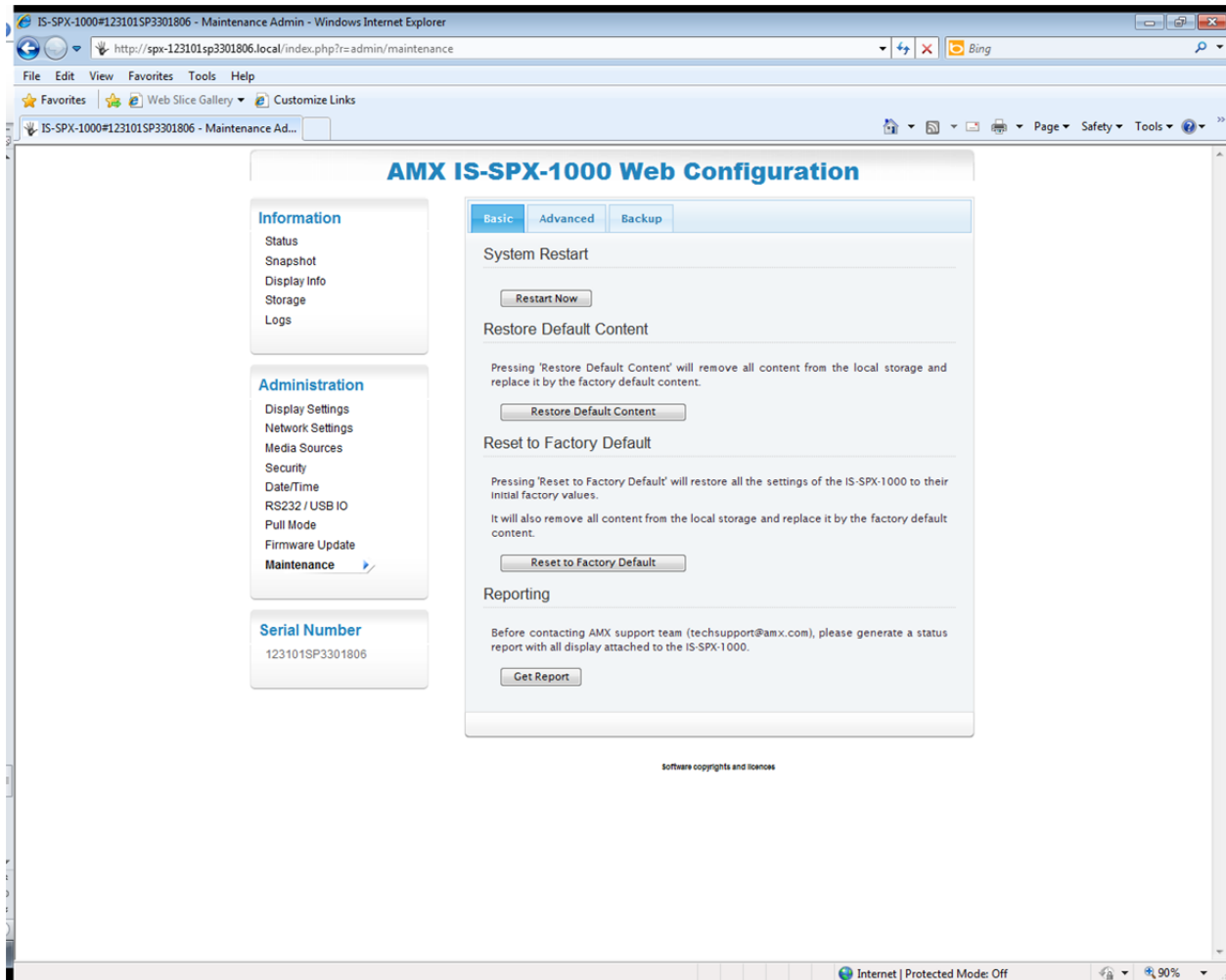
Software copyrights and licenses

Done

Internet | Protected Mode: Off

90%

17. Select Maintenance



18. Select Restart Now button