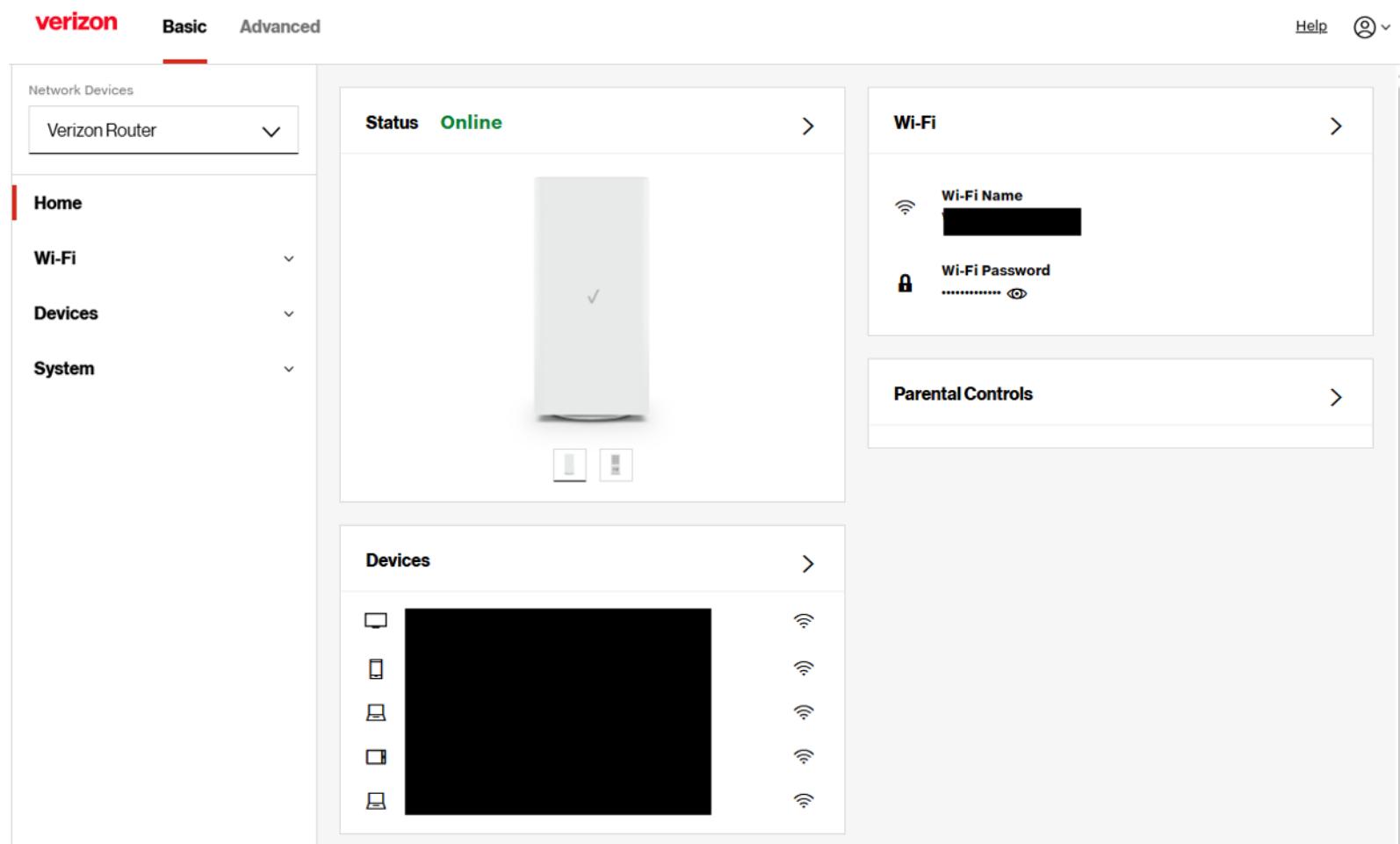


Appendix: Evidence & Screenshots

This appendix provides screenshot evidence of security changes made during the home network hardening process.

1. Home Network Router Login Dashboard

Purpose: Verified administrative access to the router interface. This confirms the ability to manage and secure network settings.



The screenshot shows the Verizon Home Network Router Login Dashboard. The top navigation bar includes the Verizon logo, Basic (selected), Advanced, Help, and a user icon. The left sidebar has dropdown menus for Network Devices (set to Verizon Router), Home, Wi-Fi, Devices, and System. The main content area displays the router's status as Online, with a large image of the router and two small icons below it. To the right, there are sections for Wi-Fi (Wi-Fi Name: [REDACTED], Wi-Fi Password: [REDACTED]), Parental Controls, and a Devices section showing five connected devices (all names redacted).

Screenshot: Router login screen

2. Wireless Security Settings - WPA3 (Wi-Fi Protected Access 3) Enabled

Purpose: Confirmed that the Wi-Fi network uses strong encryption (WPA3). Older settings like WPA2 are less secure.

The screenshot shows the Verizon Router's advanced configuration interface. The left sidebar lists various settings categories: Home, Wi-Fi (selected), Guest Network, IoT Network, Wi-Fi Protected Setup, Radio Management, Devices, Security & Firewall, Network Settings, ARP Table, DNS Server, Dynamic DNS, and IPv4 Address Distribution. Under the Wi-Fi section, the 'Primary Network' tab is active. The main area displays the 'Primary Network' configuration. It includes fields for 'Wi-Fi Name' (redacted) and 'Wi-Fi Password' (redacted). A 'Security' section indicates 'WPA3' is selected for encryption. Other settings shown include 'Broadcast Wi-Fi network name (SSID)' (Enabled), 'MAC Authentication' (Edit list), and three frequency bands: '2.4 GHz' (Wi-Fi Enabled), '5 GHz' (Wi-Fi Enabled), and '6 GHz' (Wi-Fi Disabled). A large 'Apply Changes' button is located in the top right corner.

Screenshot: Wi-Fi security settings showing WPA3 enabled

3. WPS Status - Before

Purpose: WPS was originally turned on. This feature makes connecting devices easy but can be abused by attackers.

The screenshot shows the Verizon router's configuration interface. The top navigation bar includes 'verizon' (red), 'Basic', 'Advanced' (selected), 'Help', and a user icon. The left sidebar has sections: Home, Wi-Fi (selected), Primary Network, Guest Network, IoT Network, Wi-Fi Protected Setup (selected), Radio Management, Devices, Security & Firewall, Network Settings, Diagnostics & Monitoring, and System. The main content area is titled 'Wi-Fi Protected Setup'. It shows 'Enable Wi-Fi Protected Setup' with a green 'WPS Enabled' switch. A note says 'Wi-Fi Protected Setup is an easy way to add Wi-Fi devices to your network. To use this feature, your Wi-Fi client device needs to support WPS.' A warning icon states 'Wi-Fi devices may briefly lose connectivity when turning WPS on or off.' Two options are presented: 'Option 1 (Recommended)' which uses a WPS button, and 'Option 2' which uses a PIN. Both options include a 'Start WPS' button. A note for Option 2 says 'If your client device has a WPS PIN, enter that number below (usually found on a sticker on the back of the device) and click "Register":' followed by an 'Enter PIN' input field and a 'Register' button. A checked checkbox says 'Enable router's PIN: [REDACTED]'. The bottom of the page has a footer with links like 'About Us', 'Contact Us', 'Help', 'Log In', and 'Logout'.

Screenshot: WPS enabled

4. WPS Status - After

Purpose: WPS was disabled to prevent brute-force attacks and increase network security.

The screenshot shows the Verizon router's configuration interface. The top navigation bar includes the brand name "verizon", tabs for "Basic" and "Advanced" (which is selected), and links for "Help" and "Logout". The left sidebar contains a "Network Devices" section with a dropdown menu, followed by a list of network settings: Home, Wi-Fi, Primary Network, Guest Network, IoT Network, Wi-Fi Protected Setup, Radio Management, Devices, Security & Firewall, Network Settings, Diagnostics & Monitoring, and System. The main content area is titled "Wi-Fi Protected Setup" and displays the "Enable Wi-Fi Protected Setup" section. It includes a descriptive text about WPS, a warning about connectivity loss, and a toggle switch labeled "WPS Disabled" which is currently off (grayed out). The URL in the browser's address bar is "http://192.168.1.1/wps".

Screenshot: WPS turned off

5. Administrator Password Change

Purpose: Verified that the default router password was changed to a strong one to prevent unauthorized access.

The screenshot shows the Verizon router's System Settings page. The left sidebar lists various settings categories: Network Devices, Network Settings, Diagnostics & Monitoring, System (which is expanded to show System Status, Date & Time, Factory Reset, LED Brightness, Open Source Software, Reboot Router, Remote Administration, and System Settings). The main content area is titled "System Settings" and shows the "Router Status" section with fields for Router's Hostname (redacted) and Local Domain (mynetworksettings.com). The "User Settings" section contains fields for User name (Admin), Set new password, Retype new password, and Unsuccessful Login Attempts (set to 5). A modal window titled "Applying Settings" with the message "Please wait..." is overlaid on the page. The top right of the screen shows "verizon" and tabs for Basic and Advanced, along with Help and a user icon.

Screenshot: Password settings page

6. Wi-Fi Name (SSID) - Before

Purpose: The default Wi-Fi name revealed the router brand, which can make the network easier to identify and target.

The screenshot shows the Verizon router's configuration interface under the 'Advanced' tab. The left sidebar lists various network settings like Network Devices, Home, Wi-Fi, and Security & Firewall. The main area is titled 'Primary Network' and contains the following configuration:

- Self-Organizing Network (SON):** SON Enabled (switched on).
- Wi-Fi Name:** The field shows the default SSID 'Verizon'.
- Wi-Fi Password:** A masked password is shown.
- Security:** Set encryption type used to secure the Wi-Fi traffic. Option: WPA3.
- Broadcast Wi-Fi network name (SSID):** Broadcast Wi-Fi name from router to Wi-Fi clients. Enabled (switched on).
- MAC Authentication:** Limits the Wi-Fi clients that can connect to router. Edit list.
- 2.4 GHz:** Wi-Fi Enabled (switched on).
- 5 GHz:** Wi-Fi Enabled (switched on).
- 6 GHz:** Wi-Fi Disabled (switched off).

Screenshot: Default SSID shown

7. Wi-Fi Name (SSID) - After

Purpose: The Wi-Fi name was changed to a custom one to reduce fingerprinting and protect network privacy.

The screenshot shows the Verizon router's configuration interface. The top navigation bar includes the Verizon logo, Basic and Advanced tabs, Help, and a user icon. The left sidebar lists various sections: Network Devices (selected), Home, Wi-Fi (expanded, showing Primary Network, Guest Network, IoT Network, and Wi-Fi Protected Setup), Devices, Security & Firewall, Network Settings, Diagnostics & Monitoring, and System. The main content area is titled "Primary Network". It features a "Self-Organizing Network (SON)" section with a description and a "SON Enabled" toggle switch set to green. Below this are fields for "Wi-Fi Name" (containing "H [REDACTED]"), "Wi-Fi Password" (containing "....."), and "Wi-Fi Enabled" (green toggle). There are three frequency bands listed: "2.4 GHz" (Wi-Fi Enabled), "5 GHz" (Wi-Fi Enabled), and "6 GHz" (Wi-Fi Disabled).

Screenshot: Updated SSID shown

8. Router System Information & Firmware Version

Purpose: Verified router firmware version and confirmed that updates are automatically applied by the internet provider. This ensures the router stays protected with the latest security patches.

The screenshot shows the Verizon Router's System Status page. The left sidebar has tabs for 'Basic' and 'Advanced', with 'Advanced' selected. Under 'Network Devices', 'Verizon Router' is chosen. The main content area shows the 'System Status' page with the title 'System Status'. It includes an 'Auto-refresh' toggle switch and a 'Refresh' button. The 'Router' section displays the following information:

Firmware Version	3.6.0.2_BD
Hardware Version	0.0.C
Model Name	CR1000A
Serial Number	[REDACTED]
LAN IPv4 Address	[REDACTED]
Broadband MAC address	[REDACTED]
Broadband Physical Connection	Ethernet
Router has been active for	68 day(s) 2 hours 11 minutes 59 seconds
LED Status	Normal operation

Screenshot: System info page

🔒 Privacy Note

Sensitive information (device names, MAC addresses, IPs, logins) has been redacted for security and privacy reasons.