SP 800-90B Non-Proprietary Public Use Document
Palo Alto Networks RTC Entropy Source
Document Version 0.1
Entropy Source Version 1.0

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Revision History

Version	Change
0.1	Initial draft

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1. Description

The Palo Alto Networks RTC Entropy Source is a non-physical entropy source, which is included in the following devices:

- WF-500
- M-500

2. Security Boundary

The entropy source is demonstrated in the figure below. The noise source goes through applicable health tests and conditioning before being used by the system on which it resides.

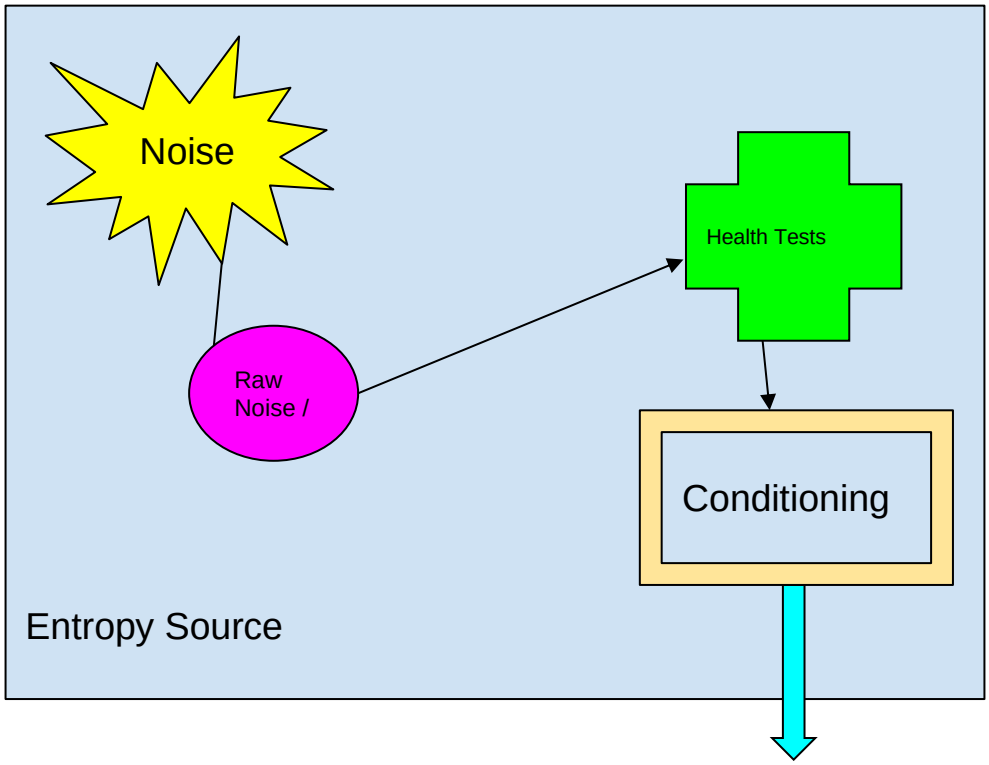

Figure 1 - Entropy Source Boundary

3. Operating Conditions

The entropy operating conditions include the following:

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Parameter	Value
Operating Temperature	41ºF to 104ºF (5ºC to 40ºC)
Maximum Current Consumption	9.5A@100VAC, 4.5A@240VAC
Maximum Power Consumption	35A

4. Configuration Settings

When the underlying platform is set in its Approved mode, the entropy source is automatically configured; there are no other settings that a user must configure for this entropy source to operate.

5. Physical Security Mechanisms

The Palo Alto Networks RTC Entropy Source operates within the physical protection mechanisms provided by the device that hosts it. These include production grade components, opacity shield(s), and tamper evident labels that all meet FIPS 140-3 Level 2 requirements.

6. Conceptual Interfaces

The interfaces available for various functions such as GetEntropy are not available to the user, but are done internally by the Palo Alto Networks modules.

7. Min-Entropy Rate

The Palo Alto Networks RTC Entropy Source provides a minimum entropy per bit of 0.50694395678.

8. Health Tests

The Palo Alto Networks RTC Entropy Source implements the following health tests:

- Adaptive Proportion Test (APT) - performed on start-up and as continuous tests
- Repetition Count Test (RCT) - performed on start-up and as continuous tests
- On-demand test - performed by restarting the entropy source and re-running the startup tests

If any of the tests above fail, the entropy source returns an error and the unit is disabled such that it does not provide any output to any applications.

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9. Maintenance

There are no maintenance actions needed for the entropy source.

10. Required Testing

Raw noise data is not available to the user to test. The user must rely on the health tests to obtain assurance that the device is operating correctly. No further testing is required.

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