

Cisco Security Advisory: Cisco Physical Access Gateway Denial of Service Vulnerability

Advisory ID: cisco-sa-20090624-gateway

<http://www.cisco.com/warp/public/707/cisco-sa-20090624-gateway.shtml>

Revision 1.0

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Summary

A denial of service (DoS) vulnerability exists in the Cisco Physical Access Gateway. There are no workarounds available to mitigate the vulnerability. This vulnerability has been corrected in Cisco Physical Access Gateway software version 1.1. Cisco has

released free software updates that address this vulnerability.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090624-gateway.shtml>.

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☐ **Affected Products**

☐ **Vulnerable Products**

Cisco Physical Access Gateway running software versions prior to 1.1 are vulnerable.

☐ **Products Confirmed Not Vulnerable**

Cisco Physical Access Gateway running software versions 1.1 or later are not vulnerable. No other Cisco products are currently known to be affected by this vulnerability.

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☐ **Details**

The Cisco Physical Access Gateway is the primary means for the Cisco Physical Access Control solution to connect door hardware, such as locks and readers, to an IP network. Certain crafted TCP port 443 packets may cause a memory leak that could lead to a denial of service (DoS) condition in the Cisco Physical Access Gateway. A TCP three-way handshake is needed to exploit this vulnerability.

This vulnerability is documented in Cisco Bug ID [CSCsu95864](#) ([registered customers only](#)) and has been assigned Common Vulnerabilities and Exposures (CVE) ID CVE-2009-1163.

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☐ **Vulnerability Scoring Details**

Cisco has provided scores for the vulnerability in this advisory based on the Common Vulnerability Scoring System (CVSS). The CVSS scoring in this Security Advisory is done in accordance with CVSS version 2.0.

CVSS is a standards-based scoring method that conveys vulnerability severity and helps determine urgency and priority of response.

Cisco has provided a base and temporal score. Customers can then compute environmental scores to assist in determining the impact of the vulnerability in

individual networks.

Cisco has provided an FAQ to answer additional questions regarding CVSS at

<http://www.cisco.com/web/about/security/intelligence/cvss-qandas.html>.

Cisco has also provided a CVSS calculator to help compute the environmental impact for individual networks at

<http://intellishield.cisco.com/security/alertmanager/cvss>.

CSCsu95864 - Memory leak with certain IP packets					
Calculate the environmental score of CSCsu95864					
CVSS Base Score - 7.8					
Access Vector	Access Complexity	Authentication	Confidentiality Impact	Integrity Impact	Availability Impact
Network	Low	None	None	None	Complete
CVSS Temporal Score - 6.4					
Exploitability		Remediation Level		Report Confidence	
Functional		Official-Fix		Confirmed	

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☐ Impact

Successful exploitation of the vulnerability described in this document may result in a memory leak. The issue could be repeatedly exploited to cause an extended DoS condition. Connected door hardware, such as card readers, locks, and other input/output devices will function intermittently during extended DoS exploitation. Doors will remain open or locked depending on the gateway's configuration.

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☐ Software Versions and Fixes

When considering software upgrades, also consult <http://www.cisco.com/go/psirt> and any subsequent advisories to determine exposure and a complete upgrade solution.

In all cases, customers should exercise caution to be certain the devices to be upgraded contain sufficient memory and that current hardware and software configurations will continue to be supported properly by the new release. If the information is not clear, contact the Cisco Technical Assistance Center (TAC) or

your contracted maintenance provider for assistance.

This vulnerability has been corrected in Cisco Physical Access Gateway software version 1.1 and can be downloaded from the following link:

<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=280588231>

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❑ Workarounds

No workarounds are available; however, mitigations that can be deployed on Cisco devices within the network are available in the Cisco Applied Mitigation Bulletin companion document for this advisory, which is available at the following link:

<http://www.cisco.com/warp/public/707/cisco-amb-20090624-gateway.shtml>

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❑ Obtaining Fixed Software

Cisco has released free software updates that address this vulnerability. Prior to deploying software, customers should consult their maintenance provider or check the software for feature set compatibility and known issues specific to their environment.

Customers may only install and expect support for the feature sets they have purchased. By installing, downloading, accessing, or otherwise using such software upgrades, customers agree to be bound by the terms of Cisco's software license terms found at

http://www.cisco.com/en/US/docs/general/warranty/English/EU1KEN_.html, or as otherwise set forth at Cisco.com Downloads at <http://www.cisco.com/public/sw-center/sw-usingswc.shtml>.

Do not contact psirt@cisco.com or security-alert@cisco.com for software upgrades.

❑ Customers with Service Contracts

Customers with contracts should obtain upgraded software through their regular update channels. For most customers, this means that upgrades should be obtained through the Software Center on Cisco's worldwide website at <http://www.cisco.com>.

❑ Customers using Third Party Support Organizations

Customers whose Cisco products are provided or maintained through prior or

existing agreements with third-party support organizations, such as Cisco Partners, authorized resellers, or service providers should contact that support organization for guidance and assistance with the appropriate course of action in regards to this advisory.

The effectiveness of any workaround or fix is dependent on specific customer situations, such as product mix, network topology, traffic behavior, and organizational mission. Due to the variety of affected products and releases, customers should consult with their service provider or support organization to ensure any applied workaround or fix is the most appropriate for use in the intended network before it is deployed.

☐ **Customers without Service Contracts**

Customers who purchase direct from Cisco but do not hold a Cisco service contract, and customers who purchase through third-party vendors but are unsuccessful in obtaining fixed software through their point of sale should acquire upgrades by contacting the Cisco Technical Assistance Center (TAC). TAC contacts are as follows.

- +1 800 553 2447 (toll free from within North America)
- +1 408 526 7209 (toll call from anywhere in the world)
- e-mail: tac@cisco.com

Customers should have their product serial number available and be prepared to give the URL of this notice as evidence of entitlement to a free upgrade. Free upgrades for non-contract customers must be requested through the TAC.

Refer to

http://www.cisco.com/en/US/support/tsd_cisco_worldwide_contacts.html for additional TAC contact information, including localized telephone numbers, and instructions and e-mail addresses for use in various languages.

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☐ **Exploitation and Public Announcements**

The Cisco PSIRT is not aware of any public announcements or malicious use of the vulnerability described in this advisory.

This vulnerability was found during internal testing.

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☐ **Status of this Notice: FINAL**

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This advisory is posted on Cisco's worldwide website at :

<http://www.cisco.com/warp/public/707/cisco-sa-20090624-gateway.shtml>

In addition to worldwide web posting, a text version of this notice is clear-signed with the Cisco PSIRT PGP key and is posted to the following e-mail and Usenet news recipients.

- cust-security-announce@cisco.com
- first-bulletins@lists.first.org
- bugtraq@securityfocus.com
- vulnwatch@vulnwatch.org
- cisco@spot.colorado.edu
- cisco-nsp@puck.nether.net
- full-disclosure@lists.grok.org.uk
- comp.dcom.sys.cisco@newsgate.cisco.com

Future updates of this advisory, if any, will be placed on Cisco's worldwide website, but may or may not be actively announced on mailing lists or newsgroups. Users concerned about this problem are encouraged to check the above URL for any updates.

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☐ **Revision History**

Revision 1.0	2009-June- 24	Initial public release
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☐ Cisco Security Procedures

Complete information on reporting security vulnerabilities in Cisco products, obtaining assistance with security incidents, and registering to receive security information from Cisco, is available on Cisco's worldwide website at http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html. This includes instructions for press inquiries regarding Cisco security notices. All Cisco security advisories are available at <http://www.cisco.com/go/psirt>.

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