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Introduction

This document describes how to install a memory kit on an Email Security Appliance (ESA) C370, C670, and X1070.

Problem Description

C360s, C370s, C660s, C670s, X1060s, and X1070s with less than 8 GB of memory, under certain configurations and traffic, can lag from excessive memory use and swapping after you upgrade to AsyncOS 8.5.x.

Background

All C360, C660, and X1060 and the C370, C670, and X1070 appliances shipped initially have 4 GB of RAM and, under certain configurations and traffic, can lag (present delays) from excessive memory usage and swapping (when the operating system (OS) uses the hard disk as temporary memory) after you upgrade to AsyncOS 8.5.x.

Problem Symptoms

With certain types of traffic, especially when there is a spike in email traffic, the affected Email Security Appliance (ESA) models lag heavily. This latency is most common on ESAs with many features enabled, which include clustering and Security Management Appliance (SMA) connections that can contribute to the overall system lag.

For earlier software versions, there is a gradual slowdown due to excessive memory swapping. The current AsyncOS handles light and medium swapping situations with no noticeable lag, but

heavy swapping situations result in the system entering a halt state. For the ESA platform, the duration of this halt state has been observed to be up to 5 minutes.

This issue causes slowness on the entire system and work queue backups. The overall experience is that the system is halted.

Workaround/Solution

X60 Hardware Upgrade Promotion

Customers that currently use C360, C660, and X1060s appliances and look to run 64-bit OS software images (8.0.x or later) might experience performance delays under certain configurations and traffic loads. This is a result of hardware configuration upgrades that have been made to the appliances since this hardware was released in 2012. A hardware upgrade promotion is available for a limited time for x60 customers in order to upgrade to the latest hardware. For more information on the program, send your requests to x60_HW_Upgrade_questions@cisco.com.

Memory Upgrade Kits for x70 Customers with 4 GB RAM

C370, C670, and x1070 appliances manufactured prior to December 2012 were configured with 4 GB RAM. Customers that run these appliances and look to operate 64-bit OS software images (8.0.x or later) might experience performance delays under certain configurations and traffic loads. A field upgradeable memory kit is available for these appliances in order to increase the memory to 8 GB RAM. Account teams will contact customers with the affected hardware and will provide these memory kits at no cost. For questions on this upgrade, contact x70_mem_upgrade@cisco.com.

How To Identify Hardware Levels

In order to verify the amount of memory in your appliance, complete these steps:

1. Access the CLI.
2. Enter the **ipcheck** command.
3. Look for "RAM Total" in the output.

How to install the new memory kit

See the link below to the Cisco Support Community (CSC). The docment on CSC has an attachment with the instructions.

Related Information

- **Field Notice - Performance issues with appliances less then 4 GB RAM**
- **Cisco Support Community**