

# Server Error Codes and Diagnostics

## Introduction

This log outlines standard error codes for the "Helios-7" server architecture. Precise identification of error codes is critical, as similar codes often indicate vastly different hardware failures.

## Connection Timeouts

Timeouts occur when the server fails to receive a response within a designated window.

### Error 504-Gateway

Code: ERR-504-G

This error indicates a Gateway Timeout. It typically occurs when an upstream server fails to send a request in time. This is a software-level issue usually resolved by refreshing the cache or increasing the timeout window in the configuration file.

### Error 505-Graphics

Code: ERR-505-G

This error indicates a GPU Thermal Throttling event. Unlike the 504-Gateway, this is a hardware safety mechanism. It triggers when the dedicated GPU core exceeds 95°C. The system will automatically lower clock speeds to prevent permanent silicon damage.

**Action Required:** Inspect cooling fans and thermal paste application immediately.

## Memory Allocations

Memory errors relate to the Random Access Memory (RAM) modules.

### Error 0x00A1

Code: MEM-LEAK-A1

This code signifies a Stack Overflow in the application layer. It is a software bug caused by an infinite loop or excessive recursion in the code. It requires a software patch.

### Error 0x00A2

Code: MEM-FAIL-A2

This code signifies a Physical DIMM Failure in Slot 2. This is a critical hardware failure. The specific RAM stick in Slot 2 has corrupted sectors and must be physically replaced.

# User Authentication

Issues related to login and security tokens.

## Error 403-F (Forbidden)

Code: AUTH-403-F

The user is recognized, but does not have permission to access the requested resource. This is an Access Control List (ACL) configuration issue.

## Error 404-F (Found/Not Found)

*Note: In the Helios-7 architecture, 404-F is a specific subtype.*

Code: FILE-404-F

The specific configuration file requested for authentication is missing from the directory. This is not a permissions issue, but a file integrity issue.