

## **PLAYBOOK: NODE.JS MEMORY EXHAUSTION (ERR\_042)**

**Scenario:** Server crashes with FATAL ERROR: JavaScript heap out of memory. **Root Cause:** Usually caused by a memory leak in long-running processes or insufficient heap allocation.

**Diagnostic Step:** Check for WARN: Garbage Collection spikes in the 60 seconds preceding the crash. **Remediation:** > 1. If usage is consistently high, increase the limit: export NODE\_OPTIONS="--max-old-space-size=4096" 2. If it's a leak, identify the offending route using a heap dump.

## **PLAYBOOK: KUBERNETES CRASHLOOPBACKOFF (ERR\_099)**

**Scenario:** Pod status shows CrashLoopBackOff. **Remediation:** Run `kubectl describe pod [pod_name]` to check for OOMKilled status. If OOMKilled, increase the memory limits in the deployment YAML.