

## MemoryMonitorNMI – Virtual Memory Monitoring Tool

**MemoryMonitorNMI** automatically monitors a Windows PC's **virtual memory usage** and sends an **email alert** when usage stays above a threshold for a specified duration.

Designed for **NMI PC's**, **S&B engineers**, and **system monitoring automation**.

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### Features

- Monitors **virtual memory %** continuously
  - Sends **email alerts** when usage exceeds a threshold
  - Reads settings from **config.json** (no rebuild needed)
  - Shows a **tray icon** while running
  - Auto-starts on Windows login
  - Uses a **safe rotating log file**
  - Fully portable EXE (no installer required)
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### Folder Structure

MemoryMonitorNMI/

```
├─ MemoryMonitorNMI.exe    → Main application
├─ config.json             → Configuration file
├─ memorymonitor_icon.ico  → Tray icon
├─ INSTALL.bat             → Add to startup
├─ UNINSTALL.bat           → Remove from startup
└─ logs/                   → Log files
```

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### Installation

1. Place the folder anywhere (recommended: C:\Tools\MemoryMonitorNMI)
  2. Edit **config.json** if needed:
    - threshold percentage
    - duration
    - SMTP email settings
  3. Run **INSTALL.bat**
  4. The app will:
    - Launch immediately
    - Add itself to Windows Startup
    - Show a system tray icon
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### **Email Alert Example**

Includes:

- Hostname
  - Memory usage
  - Threshold
  - Duration exceeded
  - Timestamp
  - Top memory-consuming processes
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### **Uninstall**

Run **UNINSTALL.bat**.

This will:


- Stop the application
- Remove startup entries
- Remove support folders

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## Configuration ( config.json )

Example:

json

 Copy code

```
{
  "monitor_settings": {
    "check_interval_seconds": 10,
    "threshold_percent": 90,
    "required_duration_minutes": 30
  },
  "alert_settings": {
    "enable_email_alerts": true,
    "send_once_per_episode": true,
    "include_top_processes": true,
    "max_processes": 5
  },
  "email_settings": {
    "smtp_server": "smtp.gmail.com",
    "smtp_port": 587,
    "use_tls": true,
    "smtp_username": "your_email@gmail.com",
    "smtp_password": "app_password",
    "email_from": "your_email@gmail.com",
    "email_to": ["recipient@example.com"],
    "email_subject": "Memory Alert - [HOSTNAME]",
    "email_prefix_text": "Automated memory alert:"
  },
  "logging": {
    "log_enabled": true,
    "log_directory": "logs",
    "log_level": "INFO",
    "max_log_size_mb": 5,
    "backup_log_files": 3
  }
}
```

