

# check for systemstats.py v1

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import psutil

import datetime

def check_high_memory_usage(threshold=50):

    high_memory_usage_processes = []

    total_memory = psutil.virtual_memory().total

    for proc in psutil.process_iter(['pid', 'name', 'memory_info']):

        try:

            memory_percent = (proc.info['memory_info'].rss / total_memory) * 100

            if memory_percent > threshold:

                high_memory_usage_processes.append((proc, memory_percent))

        except (psutil.NoSuchProcess, psutil.AccessDenied, psutil.ZombieProcess):

            pass

    return high_memory_usage_processes

def write_processes_to_file():

    now = datetime.datetime.now()

    file_name = f"processes_{now:%Y-%m-%d_%H-%M-%S}.txt"

    with open(file_name, 'w') as f:

        try:

            f.write(f"List of highest CPU usage processes on {now}:\n\n")

            for proc in sorted(psutil.process_iter(['pid', 'name', 'memory_percent', 'cpu_percent']), key=lambda p: p.info['cpu_percent'], reverse=True):

                try:

                    cpu_percent = proc.info['cpu_percent']

                    if cpu_percent > 0.0:
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        f.write(f"PID: {proc.info['pid']} - Name: {proc.info['name']}
]] - CPU%: {cpu_percent:.2f} - Memory%: {proc.info['memory_percent']:.2f}\n")

        f.write(f"\tDisk usage: {psutil.disk_usage('/').percent:.2f}%\n")

        f.write(f"\tNetwork usage: {psutil.net_io_counters().
bytes_sent/1024:.2f}KB sent/{psutil.net_io_counters().bytes_recv/1024:.2f}
KB received\n")

    except (psutil.NoSuchProcess, psutil.AccessDenied, psutil.
ZombieProcess):

        pass

    except:

        f.write("An error occurred while writing the file.\n")

    f.write("\n\n
===== \n\n")

    f.write(f"List of highest memory usage processes on {now}: \n\n")

    for proc, mem_percent in sorted(check_high_memory_usage(), key=lambda p: p[
1], reverse=True):

        f.write(f"PID: {proc.info['pid']} - Name: {proc.info['name']}
- Memory%: {mem_percent:.2f}\n")

        f.write(f"\tDisk usage: {psutil.disk_usage('/').percent:.2f}%\n")

        f.write(f"\tNetwork usage: {psutil.net_io_counters().bytes_sent/1024
:.2f}KB sent/{psutil.net_io_counters().bytes_recv/1024:.2f}KB received\n")

    f.write("\n\n
===== \n\n")

    f.write(f"List of all running processes on {now}: \n\n")

    for proc in psutil.process_iter(['pid', 'name', 'memory_percent',
'cpu_percent']):

        try:

            cpu_percent = proc.info['cpu_percent']

            mem_percent = proc.info['memory_percent']

            if cpu_percent > 0.0:

                f.write(f"PID: {proc.info['pid']} - Name: {proc.info['name']}
- CPU%: {cpu_percent:.2f} - Memory%: {mem_percent:.2f}\n")

                f.write(f"\tDisk usage: {psutil.disk_usage('/').percent:.2f}%\n
")

                f.write(f"\tNetwork usage: {psutil.net_io_counters().bytes_sent
/1024:.2f}KB sent/{psutil.net_io_counters().bytes_recv/1024:.2f}KB received\n")

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        except (psutil.NoSuchProcess, psutil.AccessDenied, psutil.ZombieProcess):
            pass

def main():
    write_processes_to_file()

if __name__ == '__main__':
    print("checking")
    main()
    print("done")
```

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Revision #2

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