

# AI AGENT SISTEM

Navodila za namestitev

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Verzija: 1.0

Datum: Februar 2026

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## 1. Zahteve za strojno opremo

Komponenta	Minimalno	Priporočeno
CPU	8 jeder	16 jeder
RAM	16 GB	32 GB
GPU	RTX 3060 (12GB)	RTX 5070 (12GB+)
Disk	256 GB SSD	1 TB NVMe SSD
Omrežje	100 Mbps	1 Gbps

## 2. Operacijski sistem

Priporočeni operacijski sistemi:

- Ubuntu Server 24.04 LTS (priporočeno)
- Wind

## 3. Namestitev na Ubuntu Server

### 3.1 Osnovna konfiguracija

```
# Posodobi sistem  
sudo apt update && sudo apt upgrade -y  
  
# Namesti osnovne pakete  
sudo apt install -y curl wget git htop nano unzip  
  
# Nastavi casovni pas  
sudo timedatectl set-timezone Europe/Ljubljana
```

### 3.2 NVIDIA Driver

```
# Preveri GPU  
lspci | grep -i nvidia  
  
# Dodaj repozitorij in namesti driver  
sudo add-apt-repository ppa:graphics-drivers/ppa -y  
sudo apt update  
sudo apt install -y nvidia-driver-550  
  
# Ponovno zazeni  
sudo reboot  
  
# Preveri  
nvidia-smi
```

### 3.3 NVIDIA Container Toolkit

Za uporabo GPU v Docker kontejnerjih:

```
# Dodaj repozitorij  
curl -fsSL https://nvidia.github.io/libnvidia-container/gpgkey | \  
  sudo gpg --dearmor -o /usr/share/keyrings/nvidia-container-toolkit-keyring.gpg  
  
# Namesti  
sudo apt install -y nvidia-container-toolkit  
  
# Konfiguriraj Docker  
sudo nvidia-ctk runtime configure --runtime=docker  
sudo systemctl restart docker
```

### 3.4 Docker

```
# Namesti Docker
curl -fsSL https://get.docker.com | sudo sh

# Dodaj uporabnika v skupino
sudo usermod -aG docker $USER

# Test
docker run hello-world
```

### 3.5 Python 3.12

```
# Namesti Python 3.12
sudo add-apt-repository ppa:deadsnakes/ppa -y
sudo apt install -y python3.12 python3.12-venv python3.12-dev

# Preveri
python3 --version
```

### 3.6 Microsoft ODBC Driver

```
# Dodaj Microsoft repozitorij
curl https://packages.microsoft.com/keys/microsoft.asc | \
  sudo tee /etc/apt/trusted.gpg.d/microsoft.asc

# Namesti driver
sudo ACCEPT_EULA=Y apt install -y msodbcsql18 mssql-tools18 unixodbc-dev
```

### 3.7 Firewall

```
sudo ufw enable
sudo ufw allow ssh
sudo ufw allow 80/tcp
sudo ufw allow 443/tcp
sudo ufw allow 8000/tcp
```

## 4. Namestitev na Windows Server

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Za Windows Server sledite tem korakom:

- Namestite NVIDIA driver z nvidia.com
- Namestite Intel driver z intel.com

## 5. Namestitev AI Agent aplikacije

### 5.1 Prenesi projekt

```
cd /opt
sudo mkdir ai-agent && sudo chown $USER:$USER ai-agent
cd ai-agent
# Kopiraj datoteke (SCP, Git, ...)
```

### 5.2 Konfiguracija

```
cp .env.example .env
nano .env
# Nastavi: DATABASE_URL, JWT_SECRET_KEY, ...
```

### 5.3 SSL certifikat

```
mkdir -p nginx/ssl
openssl req -x509 -nodes -days 365 -newkey rsa:2048 \
-keyout nginx/ssl/server.key \
-out nginx/ssl/server.crt \
-subj "/CN=ai-agent.luznar.local"
```

### 5.4 Zagon

```
# Z Docker Compose
docker compose up -d

# Nalozi LLM model
docker exec ai-agent-ollama ollama pull llama3:8b
```

## 6. SQL Server priprava

Izvedi na SQL Server kot administrator:

```
-- Ustvari login
CREATE LOGIN ai_agent_user WITH PASSWORD = 'VarnoGeslo123';

-- V LargoDb bazi
USE LargoDb;
CREATE SCHEMA ai_agent;
CREATE USER ai_agent_user FOR LOGIN ai_agent_user;

-- Dodeli pravice
GRANT SELECT ON SCHEMA::dbo TO ai_agent_user;
GRANT SELECT, INSERT, UPDATE, DELETE ON SCHEMA::ai_agent TO ai_agent_user;
```

## 7. Preverjanje namestitve

```
# Health check
curl http://localhost:8000/health

# Test prijave
curl -X POST http://localhost:8000/api/auth/login \
-H "Content-Type: application/json" \
-d '{"username": "admin", "password": "admin123"}'
```

## 8. Sistemd servis (Ubuntu)

Za avtomatski zagon ob ponovnem zagonu sistema:

```
# /etc/systemd/system/ai-agent.service
[Unit]
Description=AI Agent System
Requires=docker.service
After=docker.service

[Service]
Type=oneshot
RemainAfterExit=yes
WorkingDirectory=/opt/ai-agent
ExecStart=/usr/bin/docker compose up -d
ExecStop=/usr/bin/docker compose down

[Install]
WantedBy=multi-user.target
```

```
sudo systemctl daemon-reload
sudo systemctl enable ai-agent
sudo systemctl start ai-agent
```

## 9. Varnostne kopije

Nastavite dnevno varnostno kopijo v cron:

```
# Dodaj v crontab
0 2 * * * /opt/ai-agent/scripts/backup.sh
```

## 10. Odpravljanje tezav

### GPU ni zaznan

```
nvidia-smi  
# Ce ne deluje, ponovno namesti driver
```

### Docker ne vidi GPU

```
sudo nvidia-ctk runtime configure --runtime=docker  
sudo systemctl restart docker
```

### SQL Server povezava

```
sqlcmd -S 192.168.1.50 -U user -P 'pass' -C -Q "SELECT 1"
```

### Ollama ne deluje

```
docker logs ai-agent-ollama  
docker exec -it ai-agent-ollama ollama list
```