



MySLT Dashboard: Production Deployment

This guide provides the complete, end-to-end instructions for deploying the MySLT Monitoring Ecosystem. It covers central dashboard hosting (MERN) and remote agent setup (SNMP + Fluent Bit) for Windows and Rocky Linux.



Configuration Variables (Update These!)

Before starting, identify your IP addresses. Replace placeholders in the scripts below with your actual values:

- **DASHBOARD_IP**: The IP of your new Rocky Linux Dashboard Server (e.g., `192.168.100.137`).
 - **MONITORED_LINUX_IP**: The IP of your remote Rocky Linux application server.
 - **MONITORED_WIN_IP**: The IP of your remote Windows application server.
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Architecture Overview

- **Central Dashboard Server (Rocky Linux)**: Hosts the React frontend, Node.js backend, and MongoDB.
 - **Remote Monitored Servers (Windows & Rocky)**:
 - **Infrastructure Metrics**: Gathered via **SNMP** (UDP 161) by the Dashboard.
 - **Log Streaming**: Pushed via **Fluent Bit** (TCP 5001) to the Dashboard.
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Phase 1: Central Dashboard Hosting (Rocky Linux)

1.1 Base Environment Setup

SSH into your new Rocky Linux dashboard server and install dependencies:

```
# Update and install Node.js, MongoDB, and Nginx
sudo dnf update -y
sudo dnf install -y nodejs npm nginx

# Install MongoDB (Requires adding the MongoDB repo)
sudo tee /etc/yum.repos.d/mongodb-org-7.0.repo <<EOF
[mongodb-org-7.0]
name=MongoDB Repository
baseurl=https://repo.mongodb.org/yum/redhat/9/mongodb-org/7.0/x86_64/
gpgcheck=1
enabled=1
gpgkey=https://www.mongodb.org/static/pgp/server-7.0.asc
EOF

sudo dnf install -y mongodb-org
sudo systemctl enable --now mongod

# Install PM2 globally
sudo npm install -g pm2
```

1.2 Backend Deployment

```
cd /var/www/MYSLT-DASHBOARD/Server
npm install --production
pm2 start src/server.js --name myslt-backend
```

1.3 Frontend Deployment (Nginx)

1. Build the production assets:

```
cd /var/www/MYSLT-DASHBOARD/client
npm install
npm run build
```

2. **Configure Nginx:** Edit `/etc/nginx/sites-available/default`:

```
server {
    listen 80;
    server_name _;

    root /var/www/MYSLT-DASHBOARD/client/dist;
    index index.html;

    location / {
        try_files $uri $uri/ /index.html;
    }

    location /api {
        proxy_pass http://localhost:5001;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
    }
}
```

3. **SELinux & Firewall Configuration (Mandatory for Rocky Linux):** Apply these permissions to ensure Nginx can serve files and connect to the backend:

```
# Set SELinux contexts for the frontend build
sudo chcon -Rt httpd_sys_content_t /var/www/MYSLT-DASHBOARD/client/dist

# Allow Nginx to connect to the backend (Port 5001)
sudo setsebool -P httpd_can_network_connect 1

# Open Firewall ports (80/443 for web, 5001 for logging)
sudo firewall-cmd --add-service={http,https} --permanent
sudo firewall-cmd --add-port=5001/tcp --permanent
sudo firewall-cmd --reload
```

```
sudo systemctl restart nginx
```



Phase 2: Infrastructure Metrics (SNMP)

2.1 Rocky Linux Setup

```
sudo dnf install -y net-snmp net-snmp-utils
sudo systemctl enable --now snmpd
# Configure /etc/snmp/snmpd.conf with 'rocommunity public'
# Firewall:
sudo firewall-cmd --add-service=snmp --permanent
sudo firewall-cmd --reload
```

2.2 Windows Server Setup

1. **Enable Feature:** `Server Manager` > `Add Features` > `SNMP Service`.
2. **Configure:** `Services.msc` > `SNMP Service` Properties > `Security`.
 - Add "public" (Read Only).
 - List authorized manager IP (.137).
3. **Firewall:** Allow UDP 161.



Phase 3: Log Streaming (Fluent Bit)

3.1 Rocky Linux Setup

```
# Add Fluent Bit repo
sudo tee /etc/yum.repos.d/fluent-bit.repo <<EOF
[fluent-bit]
name = Fluent Bit
baseurl = https://packages.fluentbit.io/centos/7/\$basearch/
gpgcheck = 1
```

```

gpgkey = https://packages.fluentbit.io/fluent-bit.gpg
enabled = 1
EOF

sudo dnf install -y fluent-bit
sudo systemctl enable --now fluent-bit

#### Configure Fluent Bit:
1. Copy `fluent-bit-linux.conf` to `/etc/fluent-bit/fluent-bit.conf`.
2. **Crucial**: Edit `/etc/fluent-bit/fluent-bit.conf` and update the `Host` to your `DASHBOARD_IP`:
    ```ini
 [OUTPUT]
 Name http
 Match myslt.logs
 Host <DASHBOARD_IP> # Put your new Rocky Dashboard IP here
 Port 5001
 URI /api/logs/ingest/stream

```

## 3.2 Windows Server Setup

1. **Install**: Use the MSI installer from [fluentbit.io](https://fluentbit.io).
2. **Configure**: Place `fluent-bit-windows.conf` in `C:\Program Files\fluent-bit\conf\`.
3. **Crucial**: Edit `fluent-bit.conf` and update the `Host` and `Header` to your `DASHBOARD_IP`:

```

[OUTPUT]
 Name http
 Host <DASHBOARD_IP> # Put your new Rocky Dashboard IP here
 Port 5001
 URI /api/logs/ingest/stream

```

```
Header x-server-id <LOCAL_SERVER_IP> # The IP o
f this Windows Server
```

#### 4. Service:

```
sc create MySLT-Fluent-Bit binPath= "\"C:\Program Files\fl
uent-bit\bin\fluent-bit.exe\" -c \"C:\Program Files\fluent
-bit\conf\fluent-bit.conf\" start= auto
net start MySLT-Fluent-Bit
```

## Security & Ports Matrix

Service	Port	Protocol	Source	Destination
<b>Web UI</b>	80/443	TCP	Any	Dashboard (.137)
<b>Log Ingest</b>	5001	TCP	Remote Agents	Dashboard (.137)
<b>SNMP Query</b>	161	UDP	Dashboard (.137)	Remote Servers
<b>MongoDB</b>	27017	TCP	Localhost	Dashboard (.137)

**Happy Monitoring!** 