

Music-U-Scheduler Installer Update Guide



Latest Updates (August 15, 2025)

Major Enhancements to Professional Installer

The installer script (`install.sh`) has been comprehensively updated to include full-stack deployment with modern web frontend capabilities.



New Features Added

1. Node.js and Yarn Installation

- **Automatic Node.js Detection:** Detects existing Node.js installations (including NVM-managed versions)
- **Multi-Platform Support:** Supports installation via NodeSource repositories on Ubuntu, CentOS, Fedora
- **Yarn Package Manager:** Automatically installs Yarn for modern package management
- **Path Management:** Handles complex PATH configurations for Node.js environments

2. Frontend Environment Setup

- **Next.js Application Support:** Full setup for React/Next.js frontend
- **Dependency Management:** Automated `yarn install` for frontend dependencies
- **Production Building:** Builds frontend for production deployment
- **Development Fallback:** Graceful fallback to development mode if build fails

3. Enhanced Service Architecture

- **Separate Services:** Individual systemd services for backend and frontend
- `music-u-scheduler-backend.service` : FastAPI backend on port 8001
- `music-u-scheduler-frontend.service` : Next.js frontend on port 3000
- `music-u-scheduler.service` : Main orchestration service
- **Service Dependencies:** Proper service dependency management with PostgreSQL

4. Advanced Nginx Configuration

- **Full-Stack Proxy:** Smart routing between frontend and API
- Frontend: `https://musicu.local/` → `http://localhost:3000`
- API: `https://musicu.local/api/` → `http://localhost:8001/`
- Docs: `https://musicu.local/docs` → `http://localhost:8001/docs`
- **WebSocket Support:** Hot-reload support for development
- **Security Headers:** Enhanced security configuration

5. PostgreSQL Integration

- **Automated Database Setup:** Creates database and user automatically
- **Service Integration:** PostgreSQL as a dependency for application services
- **Configuration Management:** Handles database permissions and setup

6. Enhanced Management Tools

- **Comprehensive Launcher:** New launcher script with extensive options
 - Individual service management (`backend` , `frontend`)
 - Database setup (`setup-db`)
 - Enhanced logging and monitoring
 - **Service Monitoring:** Real-time status display for all components
 - **Log Management:** Centralized logging access for troubleshooting
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Technical Improvements

Installation Process

```
# New installation flow:
1. System dependencies (including PostgreSQL)
2. Node.js and Yarn installation
3. Repository cloning/updating
4. Python environment setup
5. Frontend environment setup
6. PostgreSQL database setup
7. Professional services configuration
8. SSL and security setup
9. Service startup and verification
```

Service Management

```
# New commands available:
./launch.sh start      # Start all services
./launch.sh backend start # Manage backend only
./launch.sh frontend start # Manage frontend only
./launch.sh setup-db   # Setup database
./launch.sh status     # Comprehensive status check
```

Default Credentials

- **Username:** `admin`
 - **Password:** `MusicU2025`
 - Automatically created during backend startup
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Updated URLs and Endpoints

Primary Access

- **Main Application:** `https://musicu.local`
- **API Documentation:** `https://musicu.local/docs`
- **Backend API:** `https://musicu.local/api/`

Direct Service Access (for debugging)

- **Frontend:** `http://localhost:3000`

- **Backend:** `http://localhost:8001`

Installation Requirements

System Requirements

- Ubuntu 20.04+ (primary support)
- CentOS 7+, Fedora 30+ (basic support)
- 2GB RAM minimum, 4GB recommended
- 5GB disk space minimum

Automatic Dependencies

- Python 3.8+
- Node.js 18+ (automatically installed)
- PostgreSQL 12+
- Nginx with SSL
- Git, curl, openssl

Upgrade Path

For Existing Installations

1. Backup Current Installation

```
bash
cp -r ~/Music-U-Scheduler ~/Music-U-Scheduler-backup
```

2. Run Updated Installer

```
bash
curl -fsSL https://raw.githubusercontent.com/dfultonthebar/Music-U-Scheduler/main/
install.sh | bash
```

3. Verify Installation

```
bash
~/Music-U-Scheduler/install.sh --verify
```

For Fresh Installations

```
curl -fsSL https://raw.githubusercontent.com/dfultonthebar/Music-U-Scheduler/main/in-
stall.sh | bash
```

Troubleshooting

Common Issues and Solutions

Node.js Installation Issues

```
# Manual Node.js installation if automatic fails
curl -fsSL https://deb.nodesource.com/setup_18.x | sudo -E bash -
sudo apt-get install -y nodejs
npm install -g yarn
```

Frontend Build Issues

```
# Manual frontend setup
cd ~/Music-U-Scheduler/frontend
export PATH="/usr/local/nvm/versions/node/v22.14.0/bin:$PATH"
yarn install
yarn build
```

Service Issues

```
# Check service status
sudo systemctl status music-u-scheduler-backend
sudo systemctl status music-u-scheduler-frontend

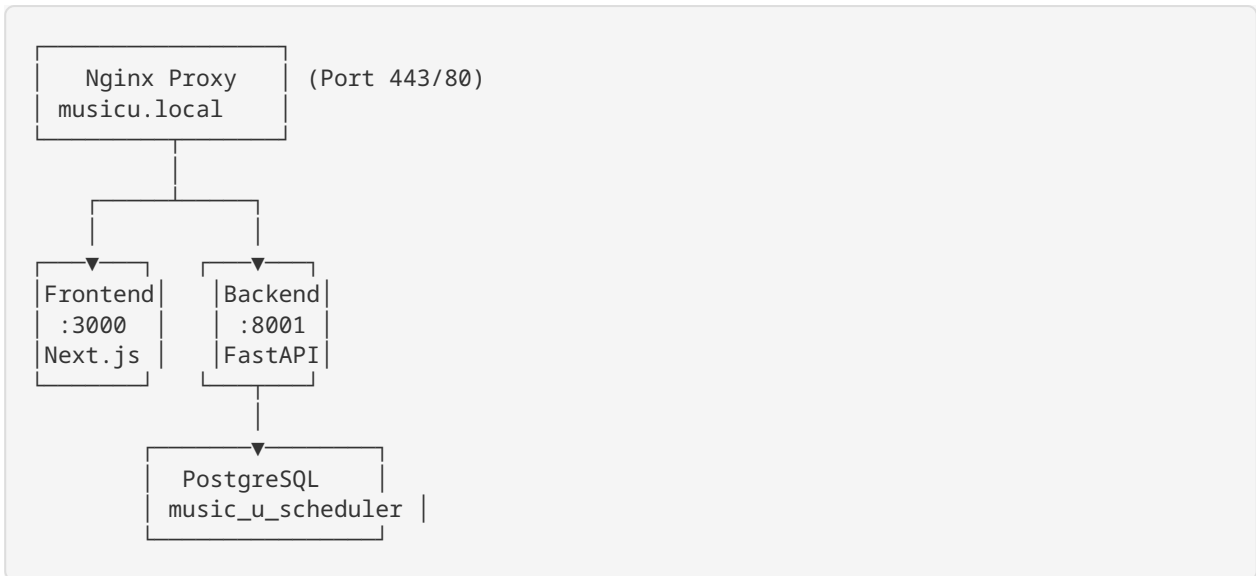
# View logs
sudo journalctl -u music-u-scheduler-backend -f
sudo journalctl -u music-u-scheduler-frontend -f
```

Database Issues

```
# Manual database setup
sudo systemctl start postgresql
sudo -u postgres createdb music_u_scheduler
sudo -u postgres psql -c "CREATE USER music_u_user WITH PASSWORD 'music_u_password';"
sudo -u postgres psql -c "GRANT ALL PRIVILEGES ON DATABASE music_u_scheduler TO music_u_user;"
```



Service Architecture



Benefits of Updated Installer

1. **One-Command Setup:** Complete full-stack deployment with single command
2. **Production-Ready:** Enterprise-grade configuration out of the box
3. **Modern Stack:** React/Next.js frontend with FastAPI backend
4. **Secure:** HTTPS/SSL, security headers, firewall configuration
5. **Maintainable:** Automated updates, comprehensive logging, service management
6. **Scalable:** Professional architecture ready for production deployment



Support

For issues with the updated installer:

1. **Check logs:** `~/Music-U-Scheduler/launch.sh logs`
2. **Verify installation:** `~/Music-U-Scheduler/install.sh --verify`
3. **View documentation:** Available in repository
4. **Service management:** Use the enhanced launcher script

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