Daily Earnings Automation Setup

Overview

The daily earnings automation system automatically checks for earnings beats and executes trades every weekday at **9:30 AM ET** (market open).

How It Works

1. **Script**: `scripts/check-daily-earnings.ts`
2. **Schedule**: Weekdays at 9:30 AM ET (2:30 PM UTC)
3. **Trigger**: Automated via cron job

Workflow

```
9:30 AM ET (Market Open)
       |
       v
  Find Active EARNINGS Screens
       |
       v
  Find Users with Automation Enabled
       |
       v
  For Each Screen ⊠ User Combination:
       |
       v
  Check if monitored stocks beat estimates
       |
       v
  Execute trades for qualified opportunities
       |
       v
  Send notifications (email/Slack/in-app)
       |
       v
  Log results to logs/daily-earnings.log
```

Installation

Option 1: Automated Setup (Recommended)

```
cd /home/ubuntu/oshaughnessy_trader/nextjs_space
chmod +x scripts/setup-daily-earnings-cron.sh
./scripts/setup-daily-earnings-cron.sh
```

This script will:
- Create the logs directory
- Install the cron job
- Test the script immediately

Option 2: Manual Setup

1. Open crontab editor:
   bash
   ```
   crontab -e
   ```

2. Add this line:
   ```
   30 14 * * 1-5 cd /home/ubuntu/oshaughnessy_trader/nextjs_space && /usr/bin/yarn tsx scripts/check-daily-earnings.ts >> logs/daily-earnings.log 2>&1
   ```

3. Save and exit

Monitoring

View Logs

```
# Real-time log monitoring
tail -f /home/ubuntu/oshaughnessy_trader/nextjs_space/logs/daily-earnings.log

# Last 50 lines
tail -n 50 /home/ubuntu/oshaughnessy_trader/nextjs_space/logs/daily-earnings.log

# Search for errors
grep "ERROR\|❌" /home/ubuntu/oshaughnessy_trader/nextjs_space/logs/daily-earnings.log
```

Manual Test Run

```
cd /home/ubuntu/oshaughnessy_trader/nextjs_space
yarn tsx scripts/check-daily-earnings.ts
```

Check Cron Status

```
# View all cron jobs
crontab -l

# Check if cron service is running
systemctl status cron
```

Configuration

User Requirements

For the automation to work for a user:

1. **Automation Enabled**: User must have `automationEnabled: true` in their `TradingAccount`
2. **Active Screen**: At least one `EARNINGS` screen must be active (`isActive: true`)
3. **Monitored Stocks**: The screen must have stocks in its watchlist
4. **Alpaca Credentials**: Valid Alpaca API keys configured

Screen Configuration

Each earnings screen can be configured with:

- `minEarningsSurprise` : Minimum earnings beat % (e.g., 5% means stock must beat estimates by at least 5%)
- `maxPositions` : Maximum number of positions to open per day for this screen (default: 10)
- **Monitored Symbols**: List of stocks to watch in the screen's watchlist

Troubleshooting

No Trades Being Executed

Check:

1. Are any monitored stocks reporting earnings today?
   ```bash
   yarn tsx check_tomorrow_earnings.ts
   ```

2. Did any stocks beat estimates by the required threshold?
   ```bash
   yarn tsx show_earnings_results.ts "Your Screen Name" 1
   ```

3. Is automation enabled for your account?
   - Go to Dashboard → Settings → Automation
   - Ensure "Enable Automated Trading" is ON

4. Are the monitored stocks overlapping with today's earnings?
   - Your screen monitors specific stocks
   - Only those stocks will trigger trades

Script Errors

Check logs:

```
tail -f logs/daily-earnings.log
```

Common issues:

- **Database connection**: Ensure `DATABASE_URL` is set in `.env`
- **API credentials**: Verify Alpaca keys are valid
- **Permissions**: Ensure script is executable (`chmod +x scripts/check-daily-earnings.ts`)

Cron Not Running

Verify cron job:

```
crontab -l | grep check-daily-earnings
```

Check cron service:

```
sudo systemctl status cron
sudo systemctl restart cron
```

Check system time:

```
date
timedatectl
```

Disabling Automation

For All Users (Remove Cron Job)

```
crontab -e
# Delete the line containing 'check-daily-earnings.ts'
# Save and exit
```

For Individual Users

1. Go to Dashboard → Settings → Automation
2. Toggle off "Enable Automated Trading"
3. Save settings

Log Format

```
================================================================
Daily Earnings Check - 11/25/2025, 9:30:00 AM ET
================================================================

Found 2 active earnings screens
Found 50 users with automation enabled

Processing: "Wednesday Earnings reports"
  - Monitored stocks: 18
  - Min surprise threshold: 5%
  - Max positions: 10
  - Running for 50 users with automation enabled

  User: john@doe.com
    ✅ Found 3 qualified opportunities
        1. AAPL - Surprise: +7.25%
        2. TSLA - Surprise: +5.50%
        3. NVDA - Surprise: +6.10%


================================================================
SUMMARY
================================================================
Screens processed: 2
Total opportunities found: 150
Total trades executed: 150
Errors: 0
Duration: 2.45s
================================================================
```

Performance

- **Execution time**: ~0.3-3 seconds (depends on number of screens × users)
- **Database queries**: Optimized with selective fetches

- **API calls**: Only for stocks with actual earnings reports
- **Notifications**: Sent asynchronously for all enabled channels

Next Steps

1. **Create your first earnings screen**:
   - Go to Dashboard → Earnings Calendar
   - Click "Create Earnings Monitor"
   - Select stocks and set your surprise threshold

2. **Enable automation**:
   - Go to Dashboard → Settings → Automation
   - Toggle on "Enable Automated Trading"
   - Configure notification preferences

3. **Monitor activity**:
   - Check logs daily: `tail -f logs/daily-earnings.log`
   - Review trades: Dashboard → Trades
   - View positions: Dashboard → Positions

FAQ

Q: What time zone is used?
A: Eastern Time (ET). The script runs at 9:30 AM ET, which is when US markets open.

Q: What happens on weekends/holidays?
A: The cron job only runs Monday-Friday. If markets are closed due to a holiday, no trades will execute even if the script runs.

Q: Can I run multiple screens?
A: Yes! The system processes all active EARNINGS screens for all users with automation enabled.

Q: How are trades prioritized if there are more opportunities than max positions?
A: Opportunities are sorted by earnings surprise % (highest first), and the top N are traded, where N = min(screen.maxPositions, account.maxPositions).

Q: Can I test without real money?
A: Yes! Enable "Paper Trading Mode" in Settings → Trading Account. This uses Alpaca's paper trading environment.

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Related: `/scripts/check-daily-earnings.ts` , `/lib/trading-engine.ts`