

Vercel Cron Deployment Checklist

Pre-Deployment

1. Generate CRON_SECRET

```
openssl rand -base64 32
```

Copy the output, you'll need it for Vercel environment variables.

2. Test Locally

Ensure you have `.env.local` with:

```
CRON_SECRET=your-generated-secret-here
```

Run tests:

```
npm run dev  
  
# In another terminal  
npm run test:cron
```

All tests should pass (✓).

3. Verify Files

Check these files exist:

- ✓ `vercel.json` (cron configuration)
- ✓ `app/api/cron/process-notifications/route.ts`
- ✓ `app/api/cron/process-goal-notifications/route.ts`
- ✓ `app/api/admin/trigger-cron/route.ts`
- ✓ `scripts/test-cron.ts`
- ✓ `.env.example` (includes CRON_SECRET)

Vercel Deployment

1. Push to Repository

```
git add .  
git commit -m "feat: add Vercel Cron jobs for notifications"  
git push origin main
```

2. Configure Environment Variables

In Vercel Dashboard:

1. Go to **Settings → Environment Variables**
2. Add the following:

Name	Value	Environment
CRON_SECRET	[your generated secret]	Production, Preview, Development

1. Click **Save**

3. Deploy

Option A: **Automatic** (if connected to Git)

- Push to `main` branch
- Vercel auto-deploys

Option B: **Manual** (using Vercel CLI)

```
vercel --prod
```

4. Verify Deployment

After deployment completes:

1. Go to **Deployments** tab
2. Click on the latest deployment
3. Verify:
 - Build successful
 - No errors in build logs
 - `vercel.json` detected

Post-Deployment Verification

1. Check Cron Jobs Are Registered

In Vercel Dashboard:

1. Go to **Cron Jobs** tab (or **Settings → Cron Jobs**)
2. You should see:
 - `GET /api/cron/process-notifications (/10 * * * *)`
 - `GET /api/cron/process-goal-notifications (/10 * * * *)`

2. Wait for First Execution

Cron jobs run every 10 minutes. Wait up to 10 minutes, then check:

View Logs:

1. Go to **Logs** tab in Vercel Dashboard
2. Filter by `[CRON]`

3. Look for entries like:

```
[CRON] Starting notification processing...
[CRON] Notification processing completed
```

3. Manual Test (Admin)

If you don't want to wait, trigger manually:

```
# Get admin session token (login to your app as admin first)
# Then use browser DevTools to copy session cookie

curl -X POST https://your-app.vercel.app/api/admin/trigger-cron \
-H "Content-Type: application/json" \
-H "Cookie: [your session cookie]" \
-d '{"job": "all"}'
```

Expected response:

```
{
  "success": true,
  "message": "Triggered 2 cron job(s)",
  "triggeredBy": "admin@example.com",
  "results": [...]
}
```

4. Verify Notifications

Check that notifications are being processed:

1. Create a test notification (if you have the UI)
2. Set it to trigger in 1-2 minutes
3. Wait for next cron run (max 10 minutes)
4. Verify notification was sent

Troubleshooting

Cron Jobs Not Showing in Dashboard

Cause: `vercel.json` not detected or invalid

Solution:

1. Verify `vercel.json` is in project root (not in subdirectory)
2. Check JSON syntax is valid: `cat vercel.json | jq`
3. Redeploy

Cron Jobs Not Executing

Cause: Only runs in production, not preview

Solution:

1. Ensure you deployed to **production** (not preview)
2. Check you're looking at **production** logs
3. Wait at least 10 minutes after deployment

401 Unauthorized Errors in Logs

Cause: CRON_SECRET not configured or mismatch

Solution:

1. Go to Vercel Dashboard → Environment Variables
2. Verify CRON_SECRET is set for **Production**
3. Redeploy after adding variable

500 Errors in Cron Execution

Cause: Application error (database, email, etc.)

Solution:

1. Check Vercel logs for specific error
 2. Common issues:
 - Database connection failed → Check DATABASE_URL
 - Gmail auth failed → Check GMAIL_USER and GMAIL_APP_PASSWORD
 - Missing dependencies → Check package.json
-

Monitoring

Daily Checks (First Week)

Check these daily for the first week:

- [] Go to Vercel Dashboard → Logs
- [] Filter by [CRON]
- [] Verify executions every 10 minutes
- [] Check for errors (red text)
- [] Verify execution times are reasonable (< 5 seconds)
- [] Check email inbox for test notifications

Weekly Checks (Ongoing)

After initial week, check weekly:

- [] Any 500 errors in logs
- [] Execution times still reasonable
- [] No unauthorized attempts (401 errors)
- [] Users receiving notifications as expected

Alerts to Set Up (Optional)

Consider setting up alerts:

1. **Vercel Integration Monitoring:**
 - Link Slack/Discord for deployment notifications
 - Get notified of failed deployments
2. **Error Tracking** (Sentry, etc.):
 - Track 500 errors automatically
 - Get notified of cron failures

3. Custom Monitoring:

- Track daily notification volume
 - Alert if cron doesn't run for 30+ minutes
 - Monitor email sending quotas
-

Rollback Plan

If cron jobs cause issues:

Quick Disable

Option 1: Remove cron configuration

```
# Temporarily rename vercel.json
mv vercel.json vercel.json.disabled
git commit -am "disable cron temporarily"
git push
```

Option 2: Redeploy previous version

```
# In Vercel Dashboard
# Go to Deployments → [previous working deployment]
# Click "Promote to Production"
```

Investigate

1. Check logs for errors
2. Test locally: `npm run test:cron`
3. Verify environment variables
4. Check database/email connections

Re-enable

```
# Restore vercel.json
mv vercel.json.disabled vercel.json
git commit -am "re-enable cron"
git push
```

Success Metrics

Your cron jobs are working correctly when:

Execution Frequency

- Logs show execution every 10 minutes
- No missing time periods

Success Rate

- > 95% of executions return 200 status
- < 5% error rate acceptable

✓ Performance

- Execution time < 5 seconds (typical)
- < 10 seconds (acceptable)
- > 10 seconds (investigate)

✓ Functionality

- Users receive scheduled notifications
- Notifications sent within 10 minutes of schedule
- No duplicate notifications

✓ Security

- No unauthorized access attempts
- CRON_SECRET properly configured
- Logs don't expose secrets

Quick Reference

View Logs

```
Vercel Dashboard → Logs → Filter [CRON]
```

Test Locally

```
npm run test:cron
```

Manual Trigger (Admin)

```
POST /api/admin/trigger-cron
Body: {"job": "all"}
```

Check Status (Admin)

```
GET /api/admin/trigger-cron
```

Emergency Disable

```
mv vercel.json vercel.json.disabled && git push
```

Support Resources

- **Vercel Cron Docs:** <https://vercel.com/docs/cron-jobs>
- **Full Setup Guide:** `CRON_SETUP.md`
- **Test Script:** `scripts/test-cron.ts`
- **Admin Dashboard:** `/api/admin/trigger-cron`

Deployment Complete! 🎉

Once you see [CRON] entries in Vercel logs and notifications being sent, your automated notification system is live!

Next Steps:

1. Monitor for first 24 hours
2. Create test notifications to verify
3. Set up optional monitoring/alerts
4. Document any custom configurations
5. Celebrate! 🎉