# 📊 Web Server Log Analysis Report

**Log File:** large_access_log
**Report Date:** Fri May  9 01:14:32 PM EDT 2025

## 1. Request Statistics
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- Total Requests: **9999**
- GET Requests: **4923**
- POST Requests: **5077**

## 2. IP Address Analysis
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- Unique IP Count: **50**

### GET/POST Counts per IP (Top 10)
```
192.168.1.9: GET=93 POST=109
192.168.1.8: GET=92 POST=112
192.168.1.7: GET=77 POST=93
192.168.1.6: GET=92 POST=98
192.168.1.5: GET=80 POST=93
192.168.1.50: GET=106 POST=81
192.168.1.4: GET=114 POST=105
192.168.1.49: GET=86 POST=101
192.168.1.48: GET=103 POST=114
192.168.1.47: GET=94 POST=108
```

## 3. Failure Analysis
---
- Failed Requests (4xx/5xx): **6618**
- Failure Percentage: **66.19%**

## 4. Top Users
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### Most Active IP (All Requests)
```
   230 192.168.1.2
```

## 5. Daily Patterns
---
### Requests per Day
```
  1510 01/May/2025
  1393 02/May/2025
```

```
   1380 03/May/2025
   1508 04/May/2025
   1439 05/May/2025
   1457 06/May/2025
   1313 07/May/2025
```
- Average Requests/Day: **1428.43**

## 6. Failure Patterns
---
### Days With Most Failures
```
   995 06/May/2025
   991 04/May/2025
   991 01/May/2025
   955 05/May/2025
   929 02/May/2025
```

## 🕙 Hourly Request Trends
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```
  10000
```

## 🔢 Status Code Distribution
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```
  1150 200
  1134 401
  1131 302
  1122 400
  1101 201
  1100 500
  1097 503
  1089 403
  1076 404
```

## 👥 Method-Specific Top Users
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### Top GET Requesters
```
   121 192.168.1.42
   119 192.168.1.26
   116 192.168.1.2
   115 192.168.1.33
   114 192.168.1.4
```

```
```
### Top POST Requesters
```
    119 192.168.1.1
    118 192.168.1.34
    118 192.168.1.18
    114 192.168.1.48
    114 192.168.1.2
```

## 🕐 Failure Time Patterns
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### Hours With Most Failures
```
    305 20
    303 03
    301 13
    299 17
    292 18
```

## 💡 Actionable Recommendations
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1. **Error Reduction**:
   - Fix missing resource: /api/data (occurred 151 times)
   - Fix missing resource: /submit-form (occurred 143 times)
   - Fix missing resource: /dashboard (occurred 138 times)

2. **Performance Optimization**:
   - Scale resources during hour  (peak: 10000 requests)

3. **Security Monitoring**:
   - Monitor IP 192.168.1.1 (suspicious: 119 POST requests)

4. **Caching Opportunities**:
   - Cache resource: /submit-form (requested 640 times)
   - Cache resource: /notfound (requested 625 times)
   - Cache resource: /api/data (requested 625 times)