



Technical Equipment Requirements for LoadTheTrucks.com

To ensure the seamless operation of LoadTheTrucks.com, a comprehensive setup of hardware and software is necessary. This document outlines the required technical equipment, backup solutions, and support infrastructure for a budget of approximately \$400,000 USD.

Server and Network Infrastructure

1. Primary Servers:

- Dell PowerEdge R740xd Server
- Specifications:
 - Dual Intel Xeon Silver 4214R 2.4GHz, 12 cores
 - 256GB RAM
 - 10TB SSD Storage
 - RAID Controller
- Quantity: 3
- Cost per unit: \$12,000
- Total: \$36,000

2. Backup Servers:

- Dell PowerEdge R740xd Server (Backup)
- Specifications:
 - Dual Intel Xeon Silver 4214R 2.4GHz, 12 cores
 - 128GB RAM
 - 10TB HDD Storage
 - RAID Controller
- Quantity: 2
- Cost per unit: \$8,000

- **Total:** \$16,000

3. **Database Servers:**

- **Dell PowerEdge R840 Server**

- **Specifications:**

- Quad Intel Xeon Gold 5218 2.3GHz, 16 cores

- 512GB RAM

- 20TB SSD Storage

- RAID Controller

- **Quantity:** 2

- **Cost per unit:** \$25,000

- **Total:** \$50,000

4. **Network Equipment:**

- **Cisco Nexus 9300 Series Switches**

- **Quantity:** 2

- **Cost per unit:** \$20,000

- **Total:** \$40,000

- **Firewalls: Cisco ASA 5500-X Series**

- **Quantity:** 2

- **Cost per unit:** \$10,000

- **Total:** \$20,000

Backup and Power Solutions

1. **Backup Power:**

- **APC Symmetra PX 48kW Scalable to 160kW N+1 Modular UPS**

- **Quantity:** 2

- **Cost per unit:** \$15,000

- **Total:** \$30,000

2. **Backup Generators:**

- **Generac 150kW Diesel Generator**

- **Quantity:** 1

- **Cost per unit:** \$50,000

- **Total:** \$50,000

3. **Data Backup:**

- **Dell EMC Data Domain DD3300**

- **Specifications:**

- 32TB Storage

- **Quantity:** 1

- **Cost per unit:** \$35,000

- **Total:** \$35,000

Workstations and Equipment for Development and Support Staff

1. **Developer Workstations:**

- **Dell Precision 5820 Tower Workstation**

- **Specifications:**

- Intel Xeon W-2295 3.0GHz, 18 cores

- 64GB RAM

- 2TB SSD

- NVIDIA Quadro RTX 4000

- **Quantity:** 10

- **Cost per unit:** \$5,000

- **Total:** \$50,000

2. **Support Staff Workstations:**

- **Dell OptiPlex 7070 Ultra**
- **Specifications:**
 - Intel Core i7-9700 3.0GHz, 8 cores
 - 16GB RAM
 - 1TB SSD
- **Quantity:** 10
- **Cost per unit:** \$1,500
- **Total:** \$15,000

3. **Laptops for Remote Work:**

- **Dell XPS 15**
- **Specifications:**
 - Intel Core i7-10750H 2.6GHz, 6 cores
 - 32GB RAM
 - 1TB SSD
- **Quantity:** 10
- **Cost per unit:** \$2,000
- **Total:** \$20,000

4. **Monitors:**

- **Dell UltraSharp 27 4K Monitor - U2720Q**
- **Quantity:** 30
- **Cost per unit:** \$600
- **Total:** \$18,000

Software and Licenses

1. **Operating Systems and Software:**

- **Windows Server 2019 Datacenter Edition**
- **Licenses:** 5
- **Cost per license:** \$6,000
- **Total:** \$30,000

2. **Development Tools:**

- **JetBrains All Products Pack (10 licenses)**
- **Cost per license:** \$650
- **Total:** \$6,500

3. **Database Management:**

- **Microsoft SQL Server 2019 Enterprise Edition**
- **Licenses:** 2
- **Cost per license:** \$14,000
- **Total:** \$28,000

Networking and Security

1. **Load Balancers:**

- **F5 BIG-IP iSeries**
- **Quantity:** 2
- **Cost per unit:** \$15,000
- **Total:** \$30,000

2. **SSL Certificates and Security:**

- **SSL Wildcard Certificates**
- **Quantity:** 5
- **Cost per unit:** \$500
- **Total:** \$2,500

Total Cost

Item	Quantity	Unit Cost	Total Cost
Primary Servers	3	\$12,000	\$36,000
Backup Servers	2	\$8,000	\$16,000
Database Servers	2	\$25,000	\$50,000
Network Switches	2	\$20,000	\$40,000
Firewalls	2	\$10,000	\$20,000
Backup Power (UPS)	2	\$15,000	\$30,000
Backup Generator	1	\$50,000	\$50,000
Data Backup System	1	\$35,000	\$35,000
Developer Workstations	10	\$5,000	\$50,000
Support Staff Workstations	10	\$1,500	\$15,000
Laptops for Remote Work	10	\$2,000	\$20,000
Monitors	30	\$600	\$18,000
Windows Server Licenses	5	\$6,000	\$30,000
Development Tools	10	\$650	\$6,500
SQL Server Licenses	2	\$14,000	\$28,000
Load Balancers	2	\$15,000	\$30,000
SSL Certificates	5	\$500	\$2,500
Total			**\$457,000**

Conclusion

This comprehensive setup includes all necessary hardware, backup solutions, and support infrastructure required to run LoadTheTrucks.com effectively. The estimated total cost is approximately \$457,000, which provides a robust and scalable foundation for the platform. By investing in high-quality equipment

and backup systems, the platform will ensure high availability, data integrity, and seamless user experience.¹