**🚑 RoboShop Project - Full Troubleshooting Guide**

This guide covers step-by-step troubleshooting for all 11 servers/microservices in the RoboShop project.

**🔧 Common Steps for All Servers**

**1. Check Service Status**

systemctl status <service-name>

Look for active (running).

**2. Check Logs**

journalctl -u <service-name> -f

**3. Test Connectivity**

ping <dependency-DNS-record>

telnet <dependency-DNS-record> <port>

curl http://<dependency-DNS-record>:<port>/health

**4. Check Environment Variables**

Inspect /etc/systemd/system/<service>.service for any wrong hostnames.

**5. Restart Service**

systemctl restart <service-name>

**6. Check DNS Resolution**

nslookup <service>.roboshop.internal

**🖥️ Frontend Server**

**Issues:**

* Static files not loading
* API calls failing

**Fixes:**

* Verify Nginx is running: systemctl status nginx
* Check /etc/nginx/default.d/roboshop.conf for correct upstream URLs
* Test frontend → backend calls using browser dev tools

**👤 User Service**

**Issues:**

* Login/Signup fails

**Fixes:**

* Check MongoDB is up: systemctl status mongod
* Test MongoDB connection: mongo --host mongodb.roboshop.internal
* Confirm Mongo URL in /etc/systemd/system/user.service

**📦 Catalogue Service**

**Issues:**

* Product list not loading

**Fixes:**

* Check MongoDB URL in catalogue service file
* Validate mongo --host mongodb.roboshop.internal

**🛒 Cart Service**

**Issues:**

* Items not getting added

**Fixes:**

* Check Redis is running: systemctl status redis
* Redis connection test: redis-cli -h redis.roboshop.internal
* Confirm correct USER and CATALOGUE hosts in /etc/systemd/system/cart.service

**🚚 Shipping Service**

**Issues:**

* Cannot calculate shipping fee

**Fixes:**

* Check MySQL is running: systemctl status mysqld
* MySQL test: mysql -h mysql.roboshop.internal -u root -p
* Confirm USER and CART hostnames in shipping service file

**💳 Payment Service**

**Issues:**

* Payment not going through

**Fixes:**

* Check RabbitMQ is running: systemctl status rabbitmq-server
* Test RabbitMQ: rabbitmqctl list\_users
* Confirm correct RabbitMQ, USER, and CART hosts in payment service file

**📤 Dispatch Service**

**Issues:**

* Order status not updating

**Fixes:**

* Confirm RabbitMQ host: rabbitmq.roboshop.internal
* Test RabbitMQ access using user/pass created earlier

**🐰 RabbitMQ Server**

**Issues:**

* No messages sent or received

**Fixes:**

* Check RabbitMQ user roboshop has full permissions
* Restart: systemctl restart rabbitmq-server
* View logs: journalctl -u rabbitmq-server -f

**🐘 MySQL Server**

**Issues:**

* Tables not found, errors during shipping

**Fixes:**

* Re-run SQL scripts if needed:

mysql -u root -pRoboShop@1 < /app/db/schema.sql

* Check MySQL bind address, firewall

**🍃 MongoDB Server**

**Issues:**

* User/Catalogue not saving data

**Fixes:**

* Start service: systemctl start mongod
* Test connection: mongo --host 127.0.0.1
* Look into /var/log/mongodb/mongod.log

**🔁 Redis Server**

**Issues:**

* Cart service not caching

**Fixes:**

* Check Redis config: /etc/redis.conf
* Test with: redis-cli -h 127.0.0.1

**📓 Final Checklist**

* ✅ All Route 53 records created and resolvable from each server
* ✅ All services enabled and started
* ✅ All dependencies reachable
* ✅ All logs checked and error-free
* ✅ /etc/systemd/system/\*.service files have correct env vars
* ✅ Run systemctl daemon-reload after any service file change