

BCS IMS - VPS Deployment Guide

Bureau of Communications Services Inventory Management System
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! PHP 8.2+ IS REQUIRED. The BCS IMS is built on Laravel 11 which requires PHP 8.2 or higher. Older PHP versions (7.x, 8.0, 8.1) will NOT work. The deploy script installs PHP 8.2 automatically on Ubuntu/Debian VPS.

1. SYSTEM REQUIREMENTS

OS:	Ubuntu 22.04 LTS (recommended)
PHP:	8.2 or higher (REQUIRED)
MySQL:	8.0+
Web Server:	Nginx
RAM:	2 GB minimum
Disk:	20 GB minimum

2. AUTOMATED DEPLOY (RECOMMENDED)

Step 1: Upload files to VPS

```
scp -r bcs-ims/ root@YOUR_VPS_IP:/var/www/
```

Step 2: Edit deploy config - open deploy/deploy.sh and update:

```
DOMAIN="your-domain.com"  
DB_PASS="YourStrongPassword!"
```

Step 3: Run the deploy script:

```
cd /var/www/bcs-ims  
chmod +x deploy/deploy.sh  
sudo bash deploy/deploy.sh
```

The script automatically installs PHP 8.2, Nginx, MySQL, Composer, configures SSL, sets permissions, runs migrations, and sets up the cron job.

3. MANUAL DEPLOY (STEP BY STEP)

Install PHP 8.2:

```
sudo apt update  
sudo add-apt-repository ppa:ondrej/php  
sudo apt install php8.2-fpm php8.2-mysql php8.2-mbstring php8.2-xml \  
php8.2-bcmath php8.2-curl php8.2-zip php8.2-gd
```

Install Composer:

```
curl -s https://getcomposer.org/installer | php  
sudo mv composer.phar /usr/local/bin/composer
```

Set up MySQL database:

```
sudo mysql  
CREATE DATABASE bcs_ims CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;  
CREATE USER 'bcs_user'@'localhost' IDENTIFIED BY 'your-password';  
GRANT ALL PRIVILEGES ON bcs_ims.* TO 'bcs_user'@'localhost';  
FLUSH PRIVILEGES; EXIT;
```

Deploy and configure Laravel:

```
cd /var/www/bcs-ims
composer install --no-dev --optimize-autoloader
cp .env.example .env
# Edit .env with your DB credentials and domain
php artisan key:generate
php artisan migrate --seed --force
php artisan config:cache && php artisan route:cache
php artisan storage:link
```

Set file permissions:

```
sudo chown -R www-data:www-data /var/www/bcs-ims
sudo chmod -R 775 /var/www/bcs-ims/storage /var/www/bcs-ims/bootstrap/cache
```

Configure Nginx - copy deploy/nginx.conf to /etc/nginx/sites-available/bcs-ims, update domain name, then enable.

SSL Certificate:

```
sudo apt install certbot python3-certbot-nginx
sudo certbot --nginx -d your-domain.com -d www.your-domain.com
```

Scheduled Tasks (depreciation engine - runs daily at 1AM):

```
crontab -e
# Add: * * * * * cd /var/www/bcs-ims && php artisan schedule:run >> /dev/null 2>&1
```

4. POST-DEPLOYMENT CHECKLIST

- Access https://your-domain.com - login as admin@bcs.gov.ph / Admin@BCS2026
- Change all default passwords immediately
- Create user accounts for BCS staff (Admin > Users)
- Set up item categories (Admin > Items Master)
- Add suppliers (Admin > Suppliers)
- Test barcode scanner (requires HTTPS for camera access)
- Test PDF report generation
- Verify depreciation cron: php artisan schedule:list

5. TROUBLESHOOTING

500 Error:

```
php artisan config:clear && php artisan cache:clear && chmod -R 775 storage/
```

DB Connection:

```
Check .env credentials. Run: sudo systemctl status mysql
```

PDF reports:

```
Run: composer require barryvdh/laravel-dompdf && php artisan config:cache
```

Barcode scanner:

```
Camera requires HTTPS. Ensure SSL certificate is installed.
```

PHP version:

```
Run: php -v (must show 8.2.x or higher)
```

6. MAINTENANCE & BACKUP

Update application:

```
cd /var/www/bcs-ims && git pull
composer install --no-dev --optimize-autoloader
php artisan migrate --force && php artisan config:cache
sudo systemctl restart php8.2-fpm
```

Backup database:

```
mysqldump -u bcs_user -p bcs_ims > bcs_backup_$(date +%Y%m%d).sql
```

View error logs:

```
tail -f /var/www/bcs-ims/storage/logs/laravel.log
```

7. SUPPORT CONTACTS

Email:	support@quanbyai.com
Phone (Legazpi):	+63 52 201 1127
Phone (Manila):	+63 930 838 4391
SLA:	Critical issues: on-site within 4 hours High: 1 working day