

# How to install System E-Card

- Use Node.js and Express.js with Nginx on a VM using GitHub to deployment
- How to apply HTTPS or SSL to System
- VM Use In E-Card

# Use Node.js and Express.js with Nginx on a VM using GitHub to deployment

## 1. Prepare VM

- **Update and install necessary packages:**

- `sudo apt update && sudo apt upgrade -y`  
`sudo apt install git nodejs npm nginx -y`

- **Verify Node.js and npm installation:**

- `node -v`  
`npm -v`

- **Install a process manager like PM2:**

- `sudo npm install -g pm2`
- 

## 2. Clone and Set Up Project

- **Navigate to the desired directory:**

- `cd /var/www`

- **Clone your project repository:**

- `git clone https://github.com/RosCheath/rupp-e-card.git`  
`cd rupp-e-card`

- **Install dependencies:**

- `npm install`

- **Run the app with PM2:**

- ```
cd src  
pm2 start app.js --name rupp-e-card  
pm2 save  
pm2 startup
```

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## 3. Configure Nginx as a Reverse Proxy

- **Create an Nginx configuration file for domain:**

- ```
sudo nano /etc/nginx/sites-available/verify.rupp.edu.kh
```

- **Add the following content:**

- ```
server {  
    server_name verify.rupp.edu.kh;  
  
    location / {  
        proxy_pass http://127.0.0.1:3000;  
        proxy_http_version 1.1;  
        proxy_set_header Upgrade $http_upgrade;  
        proxy_set_header Connection 'upgrade';  
        proxy_set_header Host $host;  
        proxy_cache_bypass $http_upgrade;  
    }  
  
    listen 80;  
}
```

- **Enable the configuration:**

- ```
sudo ln -s /etc/nginx/sites-available/verify.rupp.edu.kh /etc/nginx/sites-enabled/
```

- **Test Nginx configuration:**

- ```
sudo nginx -t
```

- **Reload Nginx:**

- ```
sudo systemctl reload nginx
```

# How to apply HTTPS or SSL to System

## 1.If enable HTTPS with Certbot

- **Install Certbot:**

- `sudo apt install certbot python3-certbot-nginx -y`

- **Obtain an SSL certificate:**

- `sudo certbot --nginx -d verify.rupp.edu.kh`

## 2. If use own Certificate

- Make folder **letsencrypt-rupp** into **/etc** and past file **certificates\_rupp**.
- And replace this code in nginx

- ```
server {
    server_name verify.rupp.edu.kh;

    location / {
        proxy_pass http://127.0.0.1:3000;
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection 'upgrade';
        proxy_set_header Host $host;
        proxy_cache_bypass $http_upgrade;
    }

    listen 443 ssl; # managed by itc
    ssl_certificate /etc/letsencrypt-rupp/certificates_rupp/verify.rupp.edu.kh.crt; # managed by itc
    ssl_certificate_key /etc/letsencrypt-rupp/certificates_rupp/verify.rupp.edu.kh.key; # managed by itc

}

server {
    if ($host = verify.rupp.edu.kh) {
```

```
        return 301 https://$host$request_uri;  
    } # managed by itc  
  
    server_name verify.rupp.edu.kh;  
  
    listen 80;  
    return 404; # managed by itc  
}
```

# VM Use In E-Card

172.17.20.23 use for domain verify.rupp.edu.kh

172.17.20.24 use for domain staff-system.rupp.edu.kh