

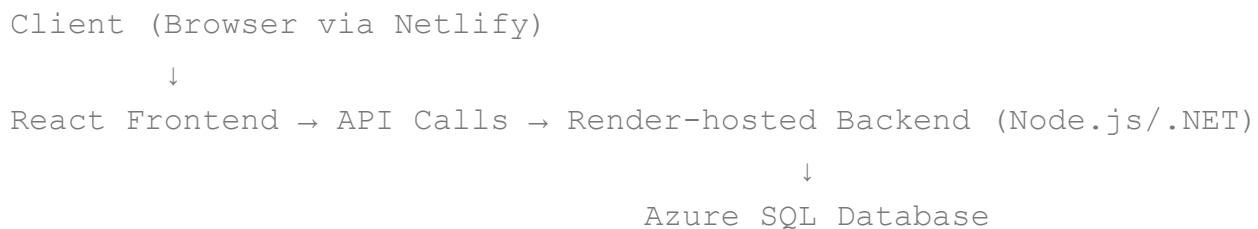
- **Database:** Azure SQL Database
  - **API (Backend):** Hosted on **Render**
  - **Frontend (React/HTML):** Hosted on **Netlify**
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## Goal:

Allow your **Render backend** to securely connect to your **Azure SQL Database**, while **Netlify frontend** only talks to the backend API – never directly to the database.

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## Final Architecture (Recommended)



## Step-by-Step Configuration

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### 1. Allow Render to Access Azure SQL Database

#### A. Find Render's Outbound IPs:

Render provides this info here:

<https://render.com/docs/static-outbound-ip-addresses>

For example (at time of writing), common IPs:

216.24.57.1/24

216.24.58.1/24

#### B. Add Render IPs in Azure Firewall

1. Go to **Azure Portal** > SQL Server > **Networking**
2. Under **Firewall Rules**, click **Add**

3. For each IP range:

- Rule name: `render-ip`
- Start IP: `216.24.57.1`
- End IP: `216.24.57.254`

4. Do the same for `216.24.58.1-254`

5. Click **Save**

Do NOT allow all IPs (0.0.0.0-255.255.255.255) – insecure.

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## 2. Store Azure SQL Connection String on Render (Secure)

On Render Dashboard:

1. Go to your **backend service**

2. Click **Environment**

3. Add a new **Environment Variable**:

- Name: `DATABASE_URL` (or whatever your app uses)
- Value: Your Azure SQL connection string, e.g.:

```
Server=tcp:mr-baraiya.database.windows.net,1433;  
Initial Catalog=MyDatabase;  
Persist Security Info=False;  
User ID=vishaladmin;  
Password=YourPassword;  
MultipleActiveResultSets=False;  
Encrypt=True;  
TrustServerCertificate=False;  
Connection Timeout=30;
```

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## 3. Connect Frontend (Netlify) to Backend (Render)

In your **frontend React app**, use API calls like:

```
// .env file (for Netlify)  
REACT_APP_API_URL=https://your-render-api.onrender.com
```

Then use:

```
fetch(`${process.env.REACT_APP_API_URL}/api/your-endpoint`)
```

Netlify will **not** need Azure SQL access – only backend does.

## Final Tips

Part	Access Needed	Secure Practice
Netlify	Backend only	Use API URL in <code>.env</code>
Render	Azure SQL DB	Whitelist Render IPs
Azure SQL	Render IP only	Use firewall rules

Would you like me to:

- Help write the exact `.env` files?
- Generate a test connection file for Render backend to Azure SQL?
- Auto-create the firewall rules using Azure CLI?

Just say the word.