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Installing Express REST Server In Production on Linux

By its nature, Express is a middle tier that is nonvisual. With none of the JavaScript code going over the line, there is no reason to pack it. The instructions assume that Node.js, Express.js, pm2, Nginx, and MariaDB have been properly installed on the Linux server.

1. To prepare the source code
   1. copy the directory to a "work" directory
   2. remove the *node_modules* directory
   3. remove the following files: ***.rest, multi-tenant*.json, package-lock.json, .env, .{any other config file}*
2. Zip the directory
3. Use **WinSCP** or Putty - *pscp*.
   1. WinSCP is a graphical FTP-like utility. Drag and drop the appropriate javaScriptStaging
   2. Once pscp.exe is installed, move it to a directory without a space in the name.
   3. Change the directory to the file with the zip file. Use the below example to copy a file to Linux. You will be prompted for your password:
   4. ```
      \Temp\pscp -P 22 mas-em-srv.zip tmiller@mas-
      devlnx1:/home/tmiller@brownandassociates.local
      // Decoded: [pscp.exe] port 22 [file] {user}@{server}:{directory}
      ```

4. Move the file to the /opt/em-rest-srv and unzip the file. Example of the directory and file structure.

```
-opt
--pm2.config.js
----mas-auth-app
----mas-auth-srv
----mas-em-app
----mas-em-srv
```

5. Continue to move the appropriate server code to their respective directories

6. From the root of the install directory of each server, you will need to run the following commands to install / update the supporting packages:

```
7. sudo npm install
   sudo npm update
```

8. Setup the pm2.config.js configuration file. Example settings are below:

```
9. module.exports = {
10.    apps: [
11.          {
12.             name: "em-srv",
13.             script: "./mas-em-srv/server.js",
14.             instances: "3",
15.             exec_mode: "cluster",
16.             instance_var: "INSTANCE_ID",
17.             watch: false,
18.             max_memory_restart: "2G",
19.             autorestart: true,
20.             wait_ready: true,
21.             listen_timeout: 10000,
22.             kill_timeout: 5000,
23.          },
24.    ],
   };
```

25. Configure the Nginx server. Please see their [technical support page](#). It is recommended when running Node.js, Express.js, pm2, and Nginx together, you let Nginx handle the compression. You will need to turn on this option in the Nginx configuration file.

26. To configure the DB connectivity, you will need to update the ***multi-tenant-edit.json*** file. Then you will call the end point *{server:port}/util/proctenant*. This end point will encrypt any newly added configuration (user and password) and then test all the DB connections. After testing is complete, it will copy the file to the ***multi-tenant.json*** file. This will minimize the file locks on the multi-tenant.json file due to editing it live. On a brand new install, you may need to create these files as they will not be included in the normal update install folder.

```
27.  [
28.    {
29.       "key": "EABC4BBF-E865-4E6F-BEB0-9D59007F1A22",
30.       "db": "mssql",
31.       "server": "DESKTOP-SQLSERVER",
32.       "port": "1433",
33.       "database": "MyTestDB",
34.       "username": "admin",
35.       "password": "123ABCabc789"
36.    },
37.    {
38.       "key": "EABC4BBF-E865-4E6F-BEB0-9D59347F3B68",
39.       "db": "mdb",
40.       "server": "localhost",
41.       "database": "mas-auth-test",
```

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```
42.        "username": "admin",
43.        "password": "123ABCabc789"
44.      },
     ]
```

The "key" is the database's dbo.default.UniqueDatabaseID field. "db" is the database type: "MS SQL Server" or "MariaDB". Before you run the curl command to encrypt new entries, you will need to change the security setting on the two "tenant" files. The chmod and curl commands to run the process tenant file are below.

```
sudo chmod 777 multi-tenant.json
sudo chmod 777 multi-tenant-edit.json
sudo curl -v http://127.0.0.1:4100/util/proctenant
```

45. To start the service, run the following command: ***sudo pm2 run pm2.config.js*** You can find other useful pm2 commands here.