The error message indicates that Node.js is running out of memory during the build process. This is a common issue when building large projects like Grafana, especially on systems with limited RAM. To resolve this, you can increase the memory allocated to Node.js. Here are the steps to fix this issue:

**Step 1: Increase Node.js Memory Limit**

1. **Set the Memory Limit for Node.js:**
   * You can increase the memory limit by setting the NODE\_OPTIONS environment variable. For example, to increase the memory limit to 4GB, you can run:

bash

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set NODE\_OPTIONS=--max\_old\_space\_size=4096

* + You can also add this to your build script in package.json to ensure it’s always set when you run the build. Modify the script section in package.json:

json

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"scripts": {

"build": "set NODE\_OPTIONS=--max\_old\_space\_size=4096 && yarn build"

}

1. **Run the Build Command:**
   * Now, try running the build command again:

bash

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yarn build

**Step 2: Modify the Build Command (if necessary)**

If you're still encountering issues, you can directly modify the command that’s causing the memory error.

1. **Modify webpack Command:**
   * Find the webpack command in your build scripts and prepend it with the memory limit increase. For example, in scripts/webpack/webpack.dev.js, you might see:

json

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"start": "webpack --config scripts/webpack/webpack.dev.js --watch"

* + Modify it to:

json

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"start": "set NODE\_OPTIONS=--max\_old\_space\_size=4096 && webpack --config scripts/webpack/webpack.dev.js --watch"

**Step 3: Use a Different Shell (if necessary)**

If the above method doesn't work or you encounter issues with set command syntax, try using a different shell like PowerShell.

1. **Set Environment Variable in PowerShell:**
   * Open PowerShell and set the NODE\_OPTIONS environment variable:

powershell

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$env:NODE\_OPTIONS="--max\_old\_space\_size=4096"

* + Then run the build command in the same PowerShell session:

powershell

Copy code

yarn build

**Step 4: Permanent Environment Variable**

If you want to set this environment variable permanently, follow these steps:

1. **Open System Properties:**
   * Press Win + X and select "System".
   * Click on "Advanced system settings" on the left.
   * In the System Properties window, click the "Environment Variables" button.
2. **Set NODE\_OPTIONS Variable:**
   * In the Environment Variables window, click "New" under "System variables" to create a new environment variable.
   * Set the variable name to NODE\_OPTIONS and the value to --max\_old\_space\_size=4096.
3. **Restart Command Prompt:**
   * Close and reopen any Command Prompt or PowerShell windows to apply the new environment variable.

**Summary**

By increasing the memory limit for Node.js, you should be able to resolve the JavaScript heap out of memory error and successfully build the Grafana open-source project on your local Windows machine. These steps ensure that Node.js has sufficient memory to handle the build process without running out of memory.

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