

# VendorSmart Backend Technical Challenge

In Vendorsmart, management companies ask for jobs, a service request, for their communities. The challenge is to find suitable and qualified vendors that offer the requested service to a community considering its location.

As part of our vendor catalog, we keep track of the service categories provided by each vendor. Additionally, we offer a compliance process to ensure they're qualified and capable in each category, they may not be compliant but still offer their service(in this case we don't attest for the quality of the service).

Now that you're part of the dev team, we expect you to create new APIs for our clients. You will implement a new feature to search potential vendors for a job. It's important to note that the compliance process will matter because compliant vendors should show first. In addition, management companies should be able to see the number of vendors available for a particular job and location on a public page.

To know if a vendor is qualified as a potential vendor:

- The vendor must be in the same region as the job;
- The vendor must provide the service category requested in the job;
- Compliant vendors have an advantage over others appearing first in the search.

## What do we expect it to:

- Be an HTTP API exposing:
  - An authenticated endpoint that returns the potential vendors for a given job;
  - An authenticated endpoint to create a vendor;
  - An authenticated endpoint to create a job;
  - A public endpoint that returns total vendors, number of compliant vendors, and number of not compliant vendors. All for a given job details (service category, location);
- Use basic auth with the user name and password, respectively, `vs_tech_challenge` and `SuperSecurePassword123@`;
- Not have any additional infrastructure like databases;

- Be easy to run;
- Add Tests;
- Use your technology of choice.

## Nice to have:

- Use Docker;
- Document any decisions you made;
- Document what you would improve;
- Things we will assess:
- Your ability to design endpoints;
- The architecture you implemented;
- The amount of bugs in your code;
- How do you model data;
- Code quality;
- Testing.

## Attachments

### Locations

```
[
  {
    "id": 1,
    "name": "Glades",
    "state": "FL"
  },
  {
    "id": 2,
    "name": "Gulf",
    "state": "FL"
  },
  {
    "id": 3,
    "name": "Hamilton",
    "state": "FL"
  },
  {
```

```
    "id": 4,
    "name": "Hardee",
    "state": "FL"
  },
  {
    "id": 5,
    "name": "Hendry",
    "state": "FL"
  },
  {
    "id": 6,
    "name": "El Paso",
    "state": "TX"
  },
  {
    "id": 7,
    "name": "Erath",
    "state": "TX"
  },
  {
    "id": 8,
    "name": "Falls",
    "state": "TX"
  },
  {
    "id": 9,
    "name": "Fannin",
    "state": "TX"
  },
  {
    "id": 10,
    "name": "Fayette",
    "state": "TX"
  },
  {
    "id": 11,
    "name": "Fisher",
    "state": "TX"
  }
]
```

## Service Categories:

```
[
  {
    "id": 1,
    "name": "Access Control Software"
```

```
},
{
  "id": 2,
  "name": "Air Conditioning"
},
{
  "id": 3,
  "name": "Landscaping"
},
{
  "id": 4,
  "name": "Landscaping Maintenance"
},
{
  "id": 5,
  "name": "Snow and Ice Removal"
},
{
  "id": 6,
  "name": "Sewer and Water Pipelining"
}
]
```

## Examples of vendor search

- Create job 1; Landscaping Maintenance; Fayette TX
- Create job 2; Air Conditioning; Fayette TX
- Create job 3; Air Conditioning; Glades FL
  
- Create Vendor 1; Landscaping Maintenance(not compliant), Air Conditioning(not compliant); Fayette TX
- Create Vendor 2; Air Conditioning(not compliant); Fayette TX
- Create Vendor 3; Air Conditioning(compliant); Fayette TX
- Create Vendor 4; Landscaping Maintenance(compliant); Glades FL
- Create Vendor 5; Air Conditioning(not compliant); Glades FL
- Create Vendor 6; Air Conditioning(compliant); Glades FL
  
- Search vendors for job 1
  - Expected: Vendor 1
- Search vendors for job 2
  - Expected: Vendor 3, Vendor 1, Vendor 2
- Search vendors for job 3
  - Expected: Vendor 6, Vendor 5
  
- Get the amount of reachable vendors in [Fayette TX] for category [Air Conditioning]
  - Expected: total: 3, compliant: 1, not compliant: 2

