Azure Blob Storage, or Google Cloud Storage, but the Pulumi backend documentation explains that only Pulumi Service supports transactional checkpointing (for fault tolerance and recovery), concurrent state locking (to prevent corrupting your infrastructure state in a team environment), and encrypted state in transit and at rest. In my opinion, without these features, it's not practical to use Pulumi in any sort of production environment (i.e., with more than one developer), so if you're going to use Pulumi, you more or less have to pay for Pulumi Service.

Large Community Versus Small Community

Whenever you pick a technology, you are also picking a community. In many cases, the ecosystem around the project can have a bigger impact on your experience than the inherent quality of the technology itself. The community determines how many people contribute to the project; how many plugins, integrations, and extensions are available; how easy it is to find help online (e.g., blog posts, questions on Stack Overflow); and how easy it is to hire someone to help you (e.g., an employee, consultant, or support company).

It's difficult to do an accurate comparison between communities, but you can spot some trends by searching online. Table 1-1 shows a comparison of popular IaC tools, with data I gathered in June 2022, including whether the IaC tool is open source or closed source, what cloud providers it supports, the total number of contributors and stars on GitHub, how many open source libraries are available for the tool, and the number of questions listed for that tool on Stack Overflow.[7]

Table 1-1. A comparison of IaC communities

	Source	Cloud	Contributors	Stars
Chef	Open	All	640	6,910
Puppet	Open	All	571	6,581
Ansible	Open	All	5,328	53,479
Pulumi	Open	All	1,402	12,723
CloudFormation	Closed	AWS	?	?
Heat	Open	All	395	379
Terraform	Open	All	1,621	33,019

[a] This is the number of cookbooks in the Chef Supermarket.

[b] This is the number of modules in Puppet Forge.

[c] This is the number of reusable roles in Ansible Galaxy.

[d] This is the number of packages in the Pulumi Registry.

[e] This is the number of templates in AWS Quick Starts.

[f] I could not find any collections of community Heat templates.

[g] This is the number of modules in the Terraform Registry.

Obviously, this is not a perfect apples-to-apples comparison. For example, some of the tools have more than one repository: e.g., Terraform split the provider code (i.e., the code specific to AWS, Google Cloud, Azure, etc.) out into separate repos in 2017, so the preceding table significantly understates activity; some tools offer alternatives to Stack Overflow for questions; and so on.

That said, a few trends are obvious. First, all of the IaC tools in this comparison are open source and work with many cloud providers, except for CloudFormation, which is closed source and works only with AWS.