Open source @ scale
10,000 engineers and counting

@jeffmcaffer
@jeffwilcox
Microsoft Open Source Programs Office
<table>
<thead>
<tr>
<th>Members</th>
<th>Repositories</th>
<th>Use Registrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>7,000</td>
<td>27,000</td>
</tr>
<tr>
<td>Release Requests</td>
<td>Yearly Growth</td>
<td>Vulnerabilities</td>
</tr>
<tr>
<td>1,000</td>
<td>2X</td>
<td>1000s</td>
</tr>
</tbody>
</table>
Open Source Programs Office

Evolved out of legal, into engineering
Board of directors of execs from major businesses

Highly collaborative
Engineering, legal, security, business, accessibility, ...

Major initiatives around
Policy and process
Tools
Culture
What does our OSPO do?

Culture
Coordinate interested parties
Drive culture
Management buy in
Business Playbooks
Rewards, recruiting and retention
Industry collaboration
Internal/external community
Conferences
Create open source tools

Processes and Tools
Define policies and processes
GitHub management
Repo landing pages
Open source repo linters
Disaster recovery/backup
Use, Contribute, Release workflows
Automation
IP scanning workflows
Component security
Attribution service
CLA
Source code disclosure site
Package (e.g., NPM) publishing
Operational systems
GitHub API proxy / operations API

Information
Public presence
Data and insights — GitHub, package managers, build, social, governance
Track org/product structure
GitHub-Microsoft id mapping
Share data publicly
Training
Documentation
Open source policy
Less is more...

// Some code required
Actual Microsoft open source decision diagram
## Simplify & unify policy

### Using open source

<table>
<thead>
<tr>
<th>Registering use</th>
<th>IP separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributing</td>
<td>IP scanning</td>
</tr>
<tr>
<td>Component security</td>
<td></td>
</tr>
</tbody>
</table>

### Release open source

<table>
<thead>
<tr>
<th>Is approval needed?</th>
<th>Approval process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patent review</td>
</tr>
</tbody>
</table>
Automation & delegate everywhere

Codified policies

Machine-readable data
Licenses, copyrights, company directory, product definitions, GitHub data

Approval workflow integration
People management
Repo linters
Component use registration
pending review components in bin/oss_cg/oss_cg-pending.json
Our six-month 2FA challenge

[Insert your own favorite corporate process jokes here]

Two-factor auth is important to protecting the brand & pending releases

Our self-service GitHub already enforces 2FA

GitHub’s API identifies our members without 2FA, nice

Why are people turning off 2FA?
Let’s ping folks to enable it

Hard deadline of October

How do we get in touch with our GitHub members?

Let’s ping folks to enable it again
This should be easier, FYI GitHub

GitHub is shipping a new org security checkbox feature!

We should warn machine accounts

Oh wait, what about collaborators?

Good, this new API is great

Communicate again
Authentic open source experiences

Great feedback loop in place with GitHub
Let GitHub do what it’s great at
Immediately use new features
Attract & retain engineers – tools we love
People management

Who is this username?
How can I identify peers?

Self-service onboarding
Automated employment cycle
Delegated permission decisions
Your Microsoft GitHub organizations

**Azure**
Official Azure SDKs, products and resources predating the official Microsoft GitHub org

**Azure-Samples**
Azure Samples as indexed by Azure.com

**AzureAD**
Azure Active Directory SDKs

**Microsoft**
The official Microsoft GitHub organization for open source projects

Available Microsoft GitHub organizations

**aspnet** [Join]
ASP.NET and ASP.NET Core open source project

Additional Organizations
The following organizations are specialized for specific teams and projects, but not general-purpose membership. Please only join if you have a business need.

**Azure-AppService-Samples** [Join]
Azure App Service product samples separate from the Microsoft and Azure-Samples orgs

**CNTK-components** [Join]
Extra Microsoft CNTK components that have license restrictions

**Microsoft-Notes** [Join]
Private organization for Microsoft Notes engineering

**MicrosoftArchive** [Join]
GitHub management

Diverse corporate GitHub user base

Approach evolved from the wild west

Enable cross-organization scenarios

Our repo create wizard is efficient, easy, adds value
Repositories
Across all officially managed Microsoft organizations

100 results for public repositories and my admin team permissions

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ospo-ghcrawler

GITHUB crawler
- JavaScript
- 4 stars
- Updated 2 hours ago
- Created 4 months ago
- Microsoft organization

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service-fabric-dotnet-data-aggregation

Learn about large-scale data aggregation and management of large volumes of end-user devices with Service Fabric.

- Javascript
- MIT License

Metrics
- 34 watchers
- 6 open issues

Pull requests
- 3 Pull requests
- 2 Pull requests applied
- 0 Pull requests NOT applied
- Average days taken to close pull requests: 0
- Average hours taken for first response to pull requests: 0
- Pull requests opened per day: 0
- Pull requests applied per day: 0
- Closed issues: 0
- Average days taken to close issues: 0

Timeline
- Commits pushed 21 hours ago
- Updated 16 days ago
- Created a year ago

Clone

Team permissions
28.3495 grams of prevention

2FA & 3rd-party app approval on for GitHub orgs
Have a clear, enforced private repo policy
Minimize organization owners
Guidance engineers grok
Comms plan
In progress
Playbooks

Frame the conversation
Business, engineering, governance

Learn and collaborate across the company

Across the industry

https://opensource.guide
Linux Foundation
TODOgroup.org
Insights

Gather data
GitHub, company systems, social media, packaging systems, ...

Analysis
Project health, API use, community shape, trends, product uptake, ...

Make widely available
Crawler-in-a-box (CIABatta) – https://github.com/microsoft/ospo-ghcrawler
Raw data – https://github.com/microsoft/ghinsights
Insights dashboards– coming
Crawler in a box
https://opensource.microsoft.com

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Thanks!