

DevSummit DC

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ArcGIS for Server: DevOps

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What is DevOps

- **DevOps** (a portmanteau of "development" and "operations") is a software development method that stresses communication, collaboration (information sharing and web service usage), **integration**, **automation** and measurement cooperation between software developers and other information-technology (IT) professionals. **DevOps acknowledges the interdependence of software development and IT operations.**

-Wikipedia

Agenda

- **Many presentations, documentation, and general information out there about planning and setting up deployments..**
- **This session is about how to manage them afterwards:**
 - **Publishing new services to your GIS server**
 - **Monitor the load and performance of services**
 - **Managing content in your portal**
 - **Moving services, users, etc. from a staging environment to production**
 - **Much more..**

Who I imagine you are

- **ArcGIS for Server administrators with a programming interest or background**
- **Maybe you do Python scripting already because of a GIS analyst background**
- **Maybe you've done .NET development with C# in the past**
- **Maybe you're already automating things using Scala, Ruby, ...**

Readily available tools

ArcGIS Online Assistant

A swiss army knife for your ArcGIS Online and Portal for ArcGIS accounts.

System Monitor (1.1.5)

System Monitor is a tool for monitoring and analyzing your enterprise GIS system.

It is developed by Professional Services and it is a part of Professional Services consulting practice.

Required tools to go beyond what someone else has created



- **Scripting or programming language of your choice:**
 - Javascript, Python, Java, C#, Ruby, Scala, Perl, .. anything that can do HTTP(S)
- **Understanding of the ArcGIS information model fundamentals**
 - REST, JSON, *items* in Portal, etc.

PortalPy

- Python 2.7 module for administering Portal for ArcGIS and ArcGIS Online
- Created and maintained by Esri
- Source code: <https://github.com/Esri/portalpy>
- Documentation: <http://esriurl.com/portalpydoc>

Roll your own Python

- **requests** module
- **json** module

Let's see an example of this..

Roll your own <insert language>

- **Show an example of a relatively complex .NET API for ArcGIS Server administration**
<https://github.com/pheede/agsadmin-devsummit>

Beyond administration and into monitoring..

- ArcGIS 10.3 for Server includes **service usage statistics** functionality
- It has an API too!
http://resources.arcgis.com/en/help/arcgis-rest-api/#/Query_Report_Data/02r300000279000000/

Chef and Puppet

- **General IT administration automation tools; the quintessential DevOps tools**
- **www.chef.io – “Chef turns infrastructure into code”**
- **puppetlabs.com – “Manage IT infrastructure as code across all environments”**
- **Esri looking to supply Chef cookbooks in future releases for automation on Amazon AWS and potentially other environments.**

GitHub resources

- github.com/pheede
 - All the samples from today
- github.com/esri
 - Lots of existing tools out there using various languages



Understanding our world.