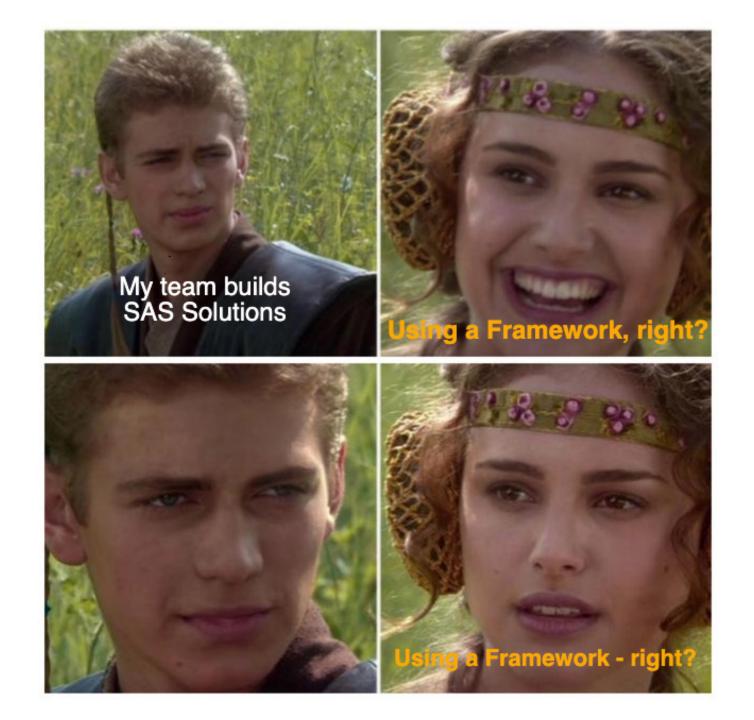


SASjs

Build Apps on SAS

https://slides.sasjs.io/phuse

PDF





Challenges with Traditional SAS Projects

- Scattered Artefacts > Where is that job?
- Shared Environment > Who changed that macro?!
- Single Server > How will we get this into production?

The absence of a standardised framework makes for inconsistent project delivery and on-boarding struggles for new developers



Why use SASjs?

- Open Source (MIT) & Actively Developed
- Faster iterations / time to value
- Work locally with your preferred tools

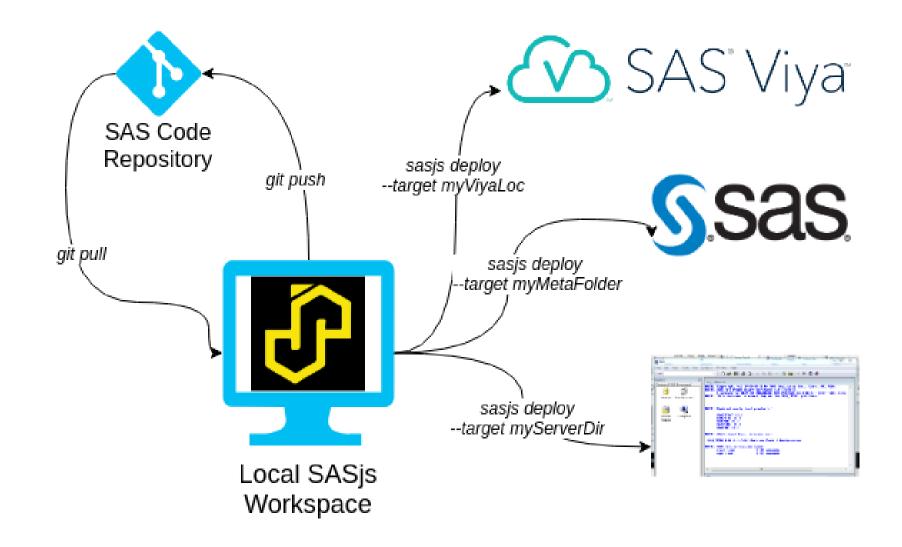


What is SASjs?

- 1. An Opinionated Approach for SAS Solution Delivery
- 2. A Collection of Tools
 - @sasjs/cli CI/CD and Automated Deployment
 - @sasjs/core Macro library
 - @sasjs/vscode-extension Battery Pack for VS Code
 - @sasjs/server Build Apps on Base SAS

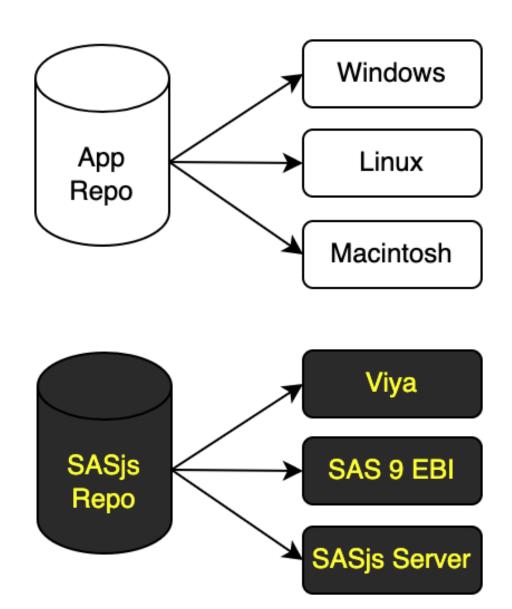


SASjs Developer Workflow





SASjs vs Other Apps





SASjs Projects

- Push to Any or Many > Server Agnostic
- Centralised Artefacts > Source Controlled
- Isolated Developer Environments > Move Fast and Break Things
- ✓ Highly suitable where SAS Programming is involved
- X Needs additional work for graphical artefacts (VA, Flows etc)



Why Do SAS Admins | It?

- Nothing to install or provision on the SAS server
- No SSH nor special permissions needed anywhere
- Nothing to configure, except:
 - Optional: Access to the target folder
 - Optional: Client / Secret (Viya)
 - Optional: SAS 9 setting for encoded passwords



Why Do Project Leads | It?

- Faster to on-board new developers
- Ability to work on multiple features in parallel
- Complete visibility of what is being developed



SASjs Config File

Every SASjs Project has a sasjs/sasjsconfig.json file, for configuration of:

- Location of Artefacts (+ Dependencies & Init/Term programs)
- Macro Variables
- Target attributes / connection settings



SASjs Target

A location on a SAS server

Core attributes:

- name > Alias for SASjs commands, eg: sasjs deploy -t dev3
- serverurl > Protocol + Host + Port
- serverType > either SASVIYA, SAS9 or SASJS
- appLoc > Root deployment folder in SAS Drive or Metadata



Running SAS

- sasjs run > Execute arbitrary SAS code
- sasjs job execute > Run a Job
- sasjs flow execute > Run a collection of Jobs

But - how to run a remote job with local macros???



Compilation - Scaffolding Consistency

```
@param access_token_var= The glo
                                                                            "jobConfig": {
@param grant type= valid values
                                                                             "jobFolders": [
  The default is "detect" (which
                                                                               "../jobs/land",
                                                                               "../jobs/publish",
                                                                               "../jobs/stage",
@version VIYA V.03.04
                                                                               "../jobs/wrapped"
@author Allan Bowe, source: http
                                                                             "initProgram": "../jobs/jobin
                                                                             "termProgram": "../jobs/jobte
<h4> SAS Macros </h4>
@li mp abort.sas
                                                                            "programFolders": [
@li mf getplatform.sas
                                                                              ../db/stg",
@li mf_getuniquefileref.sas
                                                                             "../db/pub",
@li mf getuniquelibref.sas
                                                                              "../db/rlnd",
@li mf_isblank.sas
                                                                             "../db/rpub"
                                                                            "serviceConfig": {
```



Compilation Components

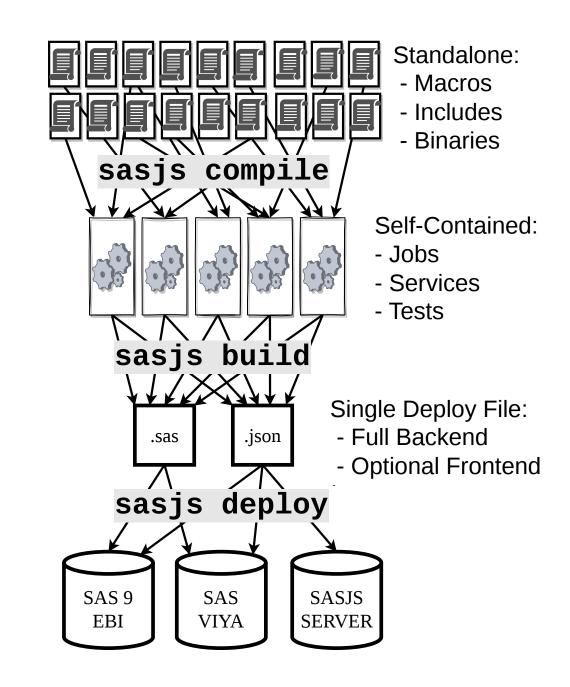
Targets are compiled by reference to the dependencies listed in the program header.

- Artefacts: **Jobs, Services, Tests**
- Dependencies: Macros, Includes, Binary Files
- Optional Frontend convert a web project into a streaming app.



sasjs cbd

- sasjs compile > Selfcontained Jobs, Services & Tests
- sasjs build > Deployment pack (JSON / SAS Program)
- sasjs deploy > Send to target location





Being a Responsible Developer

- sasjs test > Trigger one or more Tests
- sasjs lint > Check Code Quality / Best Practices
- sasjs doc > Generate docs (+ lineage) from program headers

More commands at https://cli.sasjs.io



CLI Pre-Requisites



To install the CLI: npm i -g @sasjs/cli



Demo

```
sasjs lint
```

sasjs doc

sasjs auth

sasjs cbd

sasjs test

sasjs run

sasjs job execute



Resources

- https://sasjs.io/resources
- https://datacontroller.io
- https://github.com/sasjs
- https://cli.sasjs.io
- https://sasapps.io