

Advanced Solutions Site Analysis Portal

April 2023



Sitespeed.io

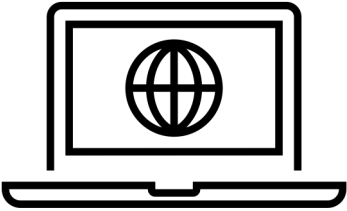


- Created in 2012 as an open-source project
- Easy to configure and run
- Capabilities continue to evolve/improve with 700+ developers
- Full integration with tools such as WPT, CrUX, PSI, Lighthouse, S3, GCS, Graphite, InfluxDB
- Well documented and great support (Github, Slack, Facebook, Twitter)
- All test results saved in a time-series database
- Extensive scripting support for multi-page journeys
- SPA support
- *The list goes on ...*

Use Cases

- Single source of data for TBAs, web site analysis, general research, etc.
- Collect data for competitive benchmark studies
- Single pane of glass for all vital metrics
 - Domain and Page Metrics
 - Site Construction
 - 1st & 3rd Party Information
 - Largest JS, CSS, and Images
 - Slowest First and Third-Party Resources
 - Prescriptive Guidance
 - Core Web Vitals
 - Waterfall
 - Filmstrip
 - Video
 - Google Lighthouse
 - Chrome User Experience (CrUX)

Site Analysis Portal

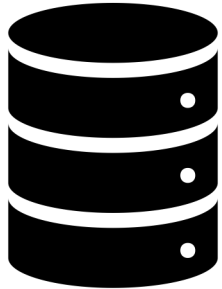
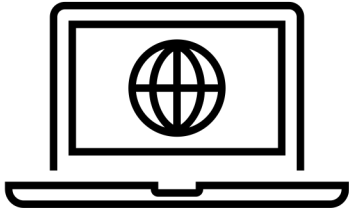


Single Domain

Competitive Analysis



Grafana

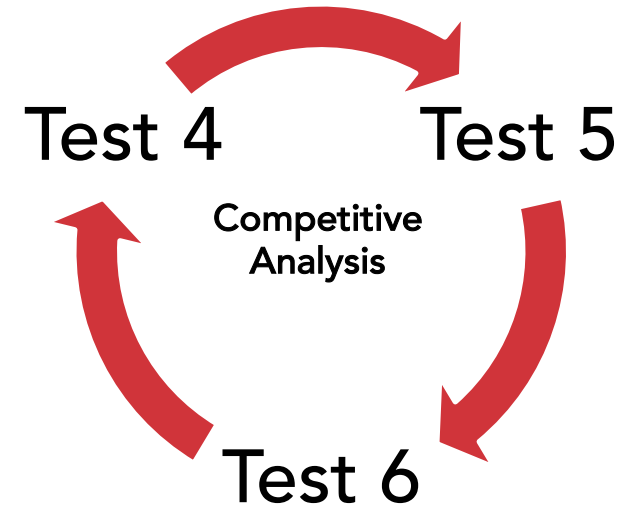
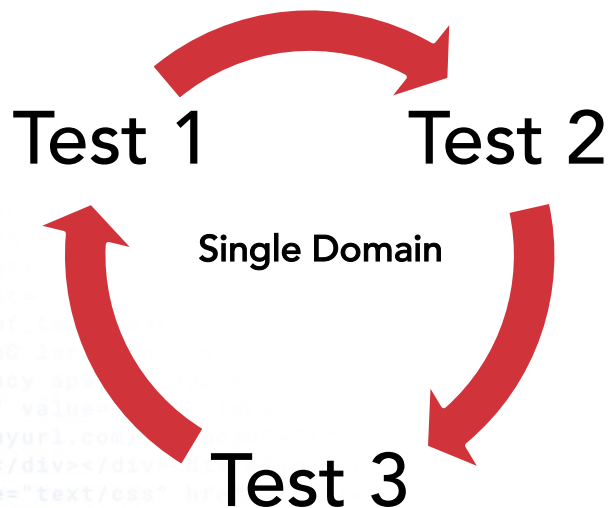


graphite

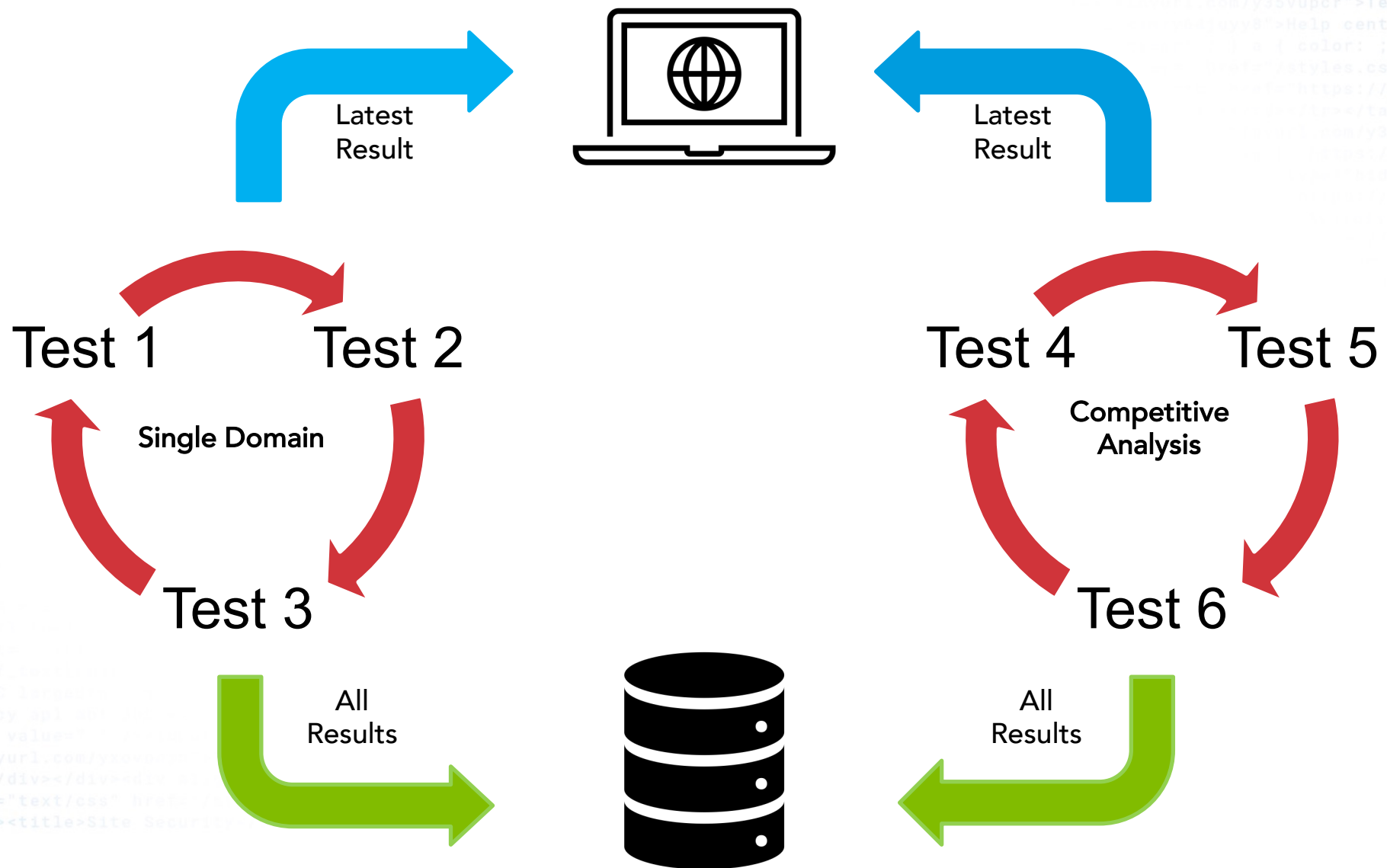


Continuous Testing

- Single Domain and Competitive Analysis testing is driven by Sitespeed.io
- Tests are performed on a LAN and an emulated mobile connection
- The number of unique tests and the number of URLs tested in parallel depends on the number of other tests running on the system



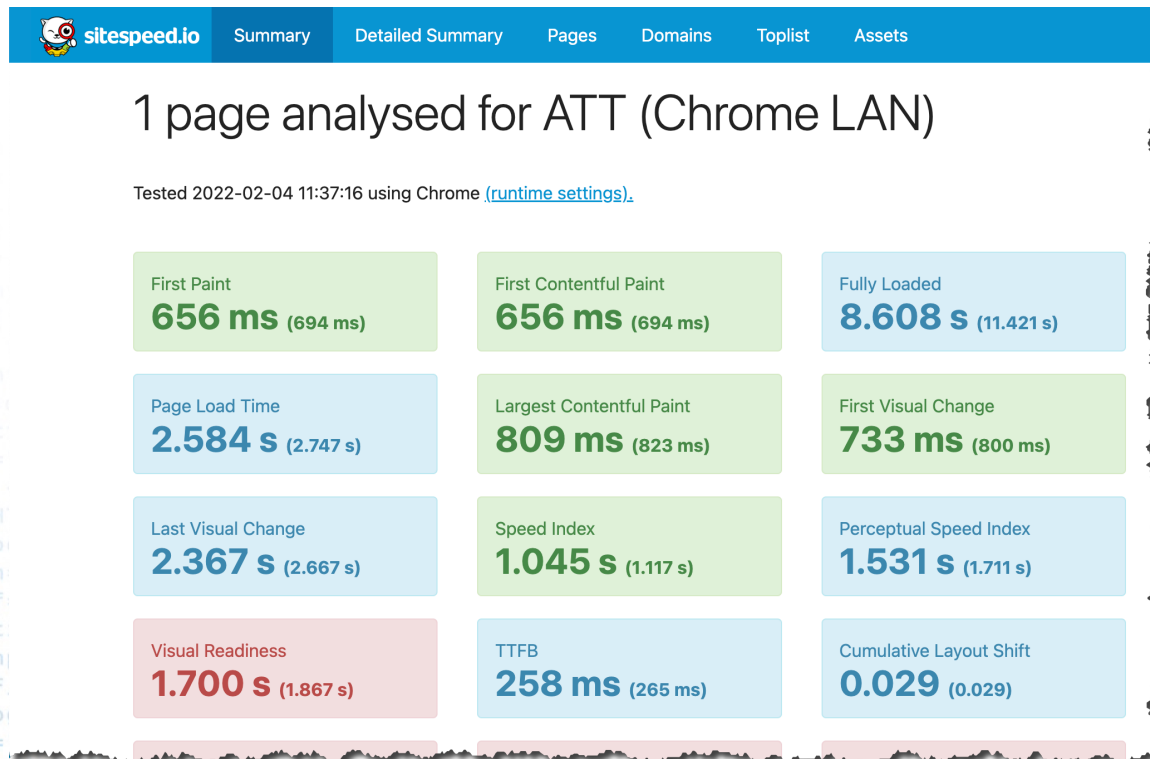
Data Flow



Interfaces

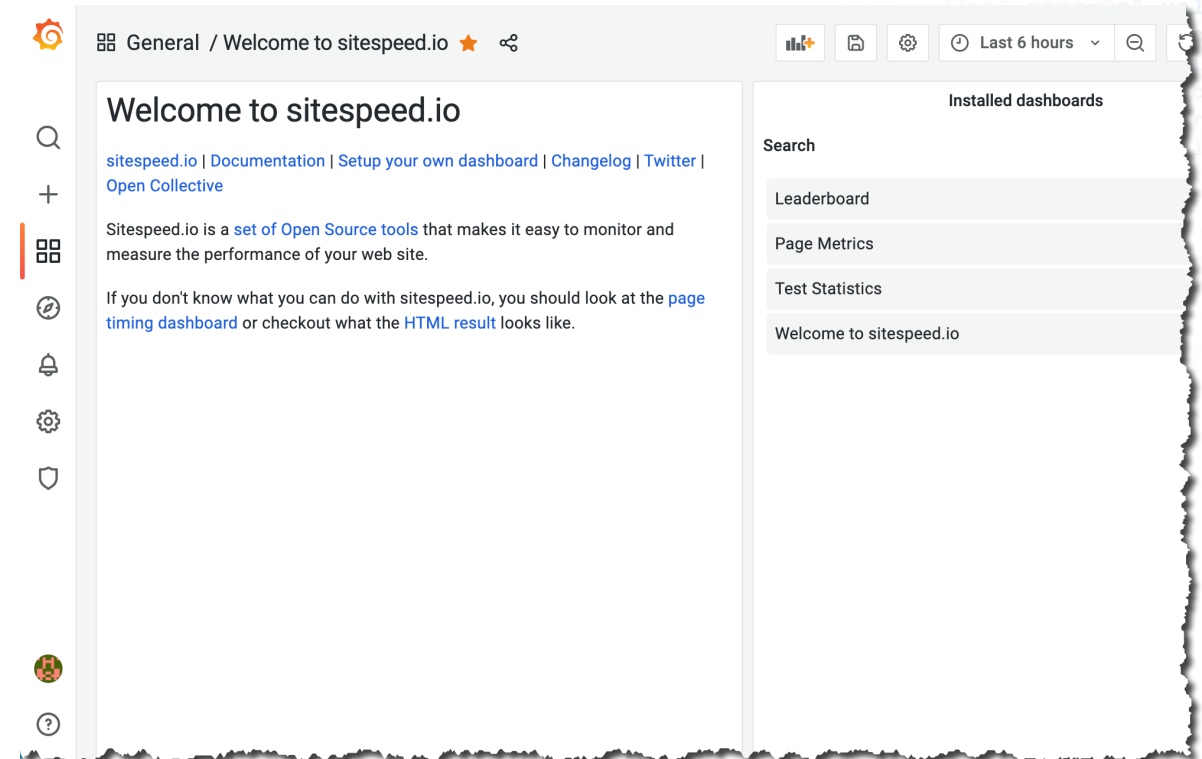
Sitespeed.io

- Open access
- Dynamically updated



Grafana

- Restricted access
- Rich dashboard capabilities



Servers



Jump



Sitespeed *



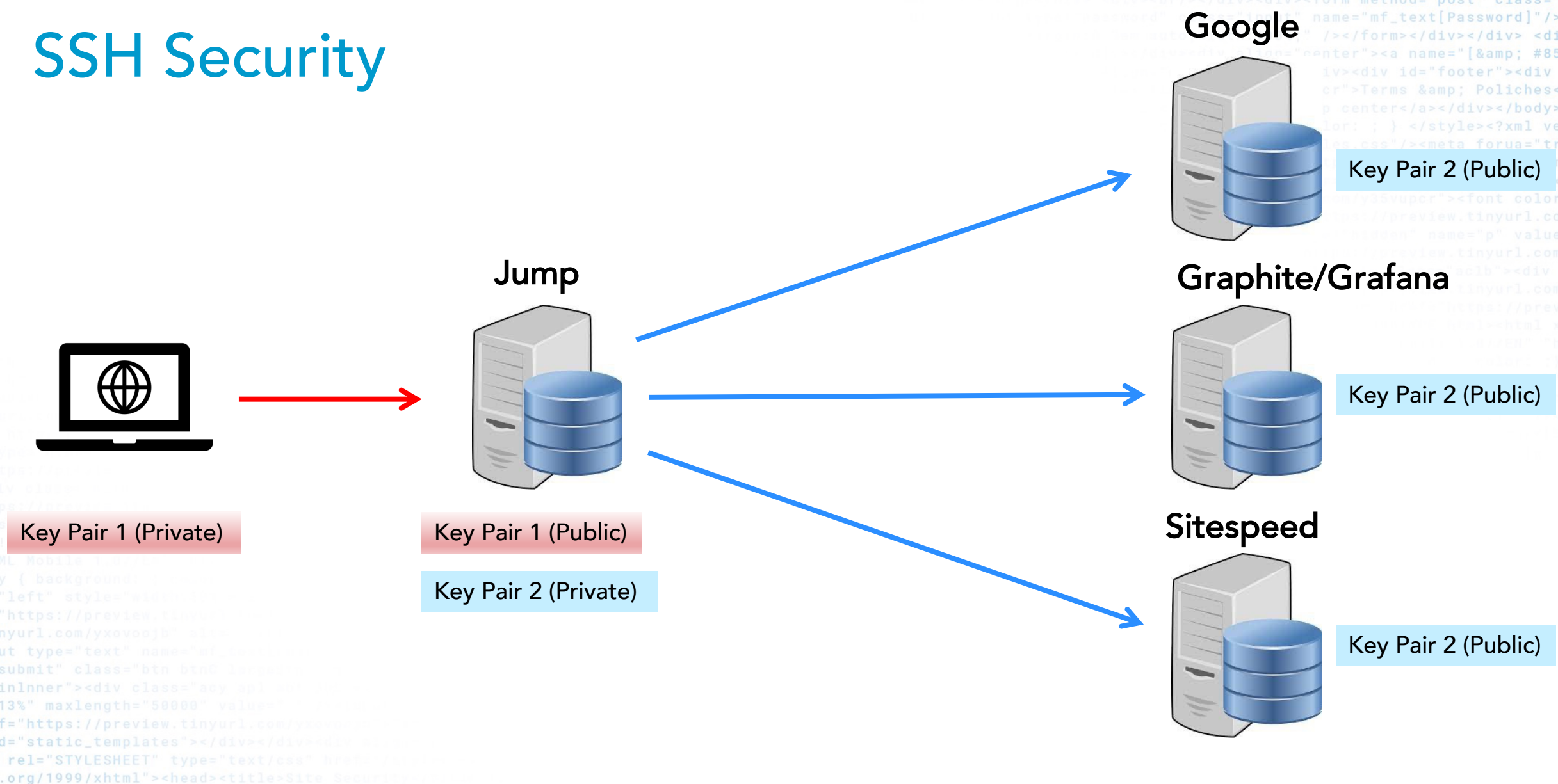
Google



Graphite/Grafana

* One machine in each testing location

SSH Security



Firewall Security

Jump



OPEN

TCP 22 (unrestricted)
TCP 80/443 (unrestricted)
ICMP (unrestricted)

Sitespeed



OPEN

TCP 22 (Admin Portal)
TCP 80/443 (unrestricted)
ICMP (unrestricted)

Google



OPEN

TCP 22 (Admin Portal)
ICMP (unrestricted)

Graphite/Grafana



OPEN

TCP 22 (Admin Portal)
TCP 80/443 (unrestricted)
TCP 8888, 2003 (Sitespeed/Google)
ICMP (unrestricted)

Default Rule – Drop all unmatched traffic

Software Components

Jump, Sitespeed, Google



- Sitespeed.io running in Docker
- nginx web server
- HTTPS 443



Graphite/Grafana



- Graphite running in Docker
- HTTP 8888
- Carbon TCP 2003



- Grafana runs natively
- Embedded Apache server
- HTTPS 443

