White paper

# HP Site Flow security and availability

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# 1   HP Site Flow

HP Site Flow is reinventing production management with a set of cloud-based services that make it easy to print only what you need, when you need it, the most secure way. This revolutionary advance, which includes a cloud-based content repository, enables you to significantly reduce your costs, bring inventory down to zero, and eliminate waste.

## 1.1.1   Optimize supply chain

HP Site Flow is the ultimate set of services for supply chain optimization, enabling you to dramatically improve your capital and cash flow.

- Print only the books that are already purchased for publishing; but you print on demand all your content.
- Reduce transportation time and costs, with distributed printing.
- Keep inventory virtual, freeing up capital and reducing or eliminating warehousing costs.

## 1.1.2   Unleash the power of content automation

With HP Site Flow, you can fully automate multiple stages of your workflow, from content ingestion through to inventory and order management. Automating these processes can save time and costs, reduce human error, and increase visibility and control.

- Content ingestion – Bulk upload files, automate preflight, and utilize print specifications optimized for printing on HP presses.
- Virtual inventory management – EfficieHIPntly manage your catalog and versions, according to your settings.
- Order management – Simplify integration with your HP print service providers using the Site Flow API, distribute orders among multiple print partners, define your own order submission rules, and manage order fulfillment according to strict SLAs.

## 1.1.3   Print anywhere

Finally, you can reap the economic and environmental benefits of onshoring. Site Flow delivers a proven platform for automated worldwide distributed print that enables you to work with your preferred printers and partners, anywhere.

- Rely on a network of your selected printers and destinations.
- Get your files printed and delivered quickly.
- Get superb quality on every print with HP presses, no matter where it is printed.

# 2   Architecture Diagram

HP Site Flow and HP Piazza are products built on top of a set of APIs and infrastructure components to very efficiently create value for print service providers. Standard APIs are reused across products in the same way as components are reused across APIs.  Hence providing a high level of consistency and service quality in all the products.

**Products**

HP Site Flow    HP Piazza

**API**

| Workforce API | Order API | Schedule API | File API | Device/ Agent API | Location + Tracking API | Product API | Dashboard API |

**Infrastructure**

| Workforce | OF Auth | Autoscaler (Kubernetes) | Deployment manager | Edge (Horizon) | View Framework |

**Services**

| S3 | EC2 | EKS | Kong | Metabase | Redshift |
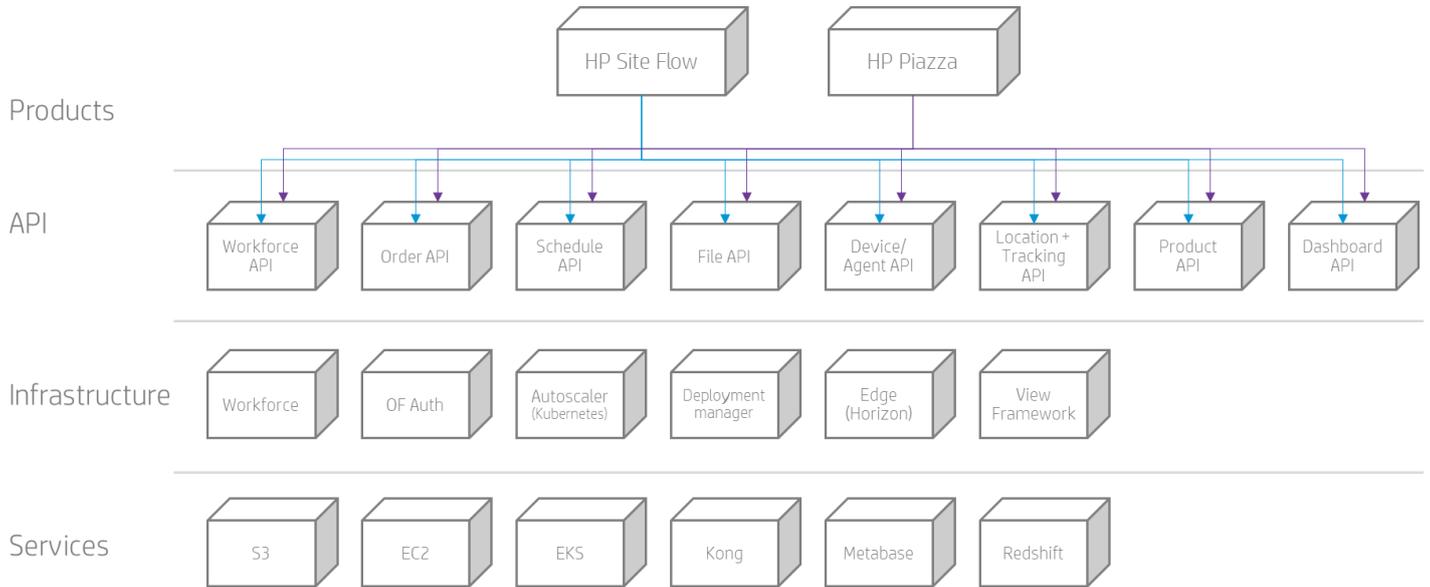
Security capabilities are built in on this architecture so that all connections, data handlers, and information itself is kept, transferred and managed securely across products, API and components.

# 3   Security architecture diagram

HP is absolutely committed to making sure data in the cloud is protected to the highest degree. The information in this document focuses on the security and availability of the HP Site Flow solution. It describes the measures we're taking in different areas to address any concerns you might have about the confidentiality, integrity, and availability of your systems and data.

## Data Centers

(ISO 27001 certification & Level 1 service provider under Payment Card Industry Data Security Standard.)

(Data Centers undergo annual SOC 1 audits & successfully evaluated at Moderate level for Federal government systems, as well as DIACAP Level 2 for DoD systems)

**Data Warehouse**

Data at Rest stored on encrypted file system using LUKS with 1024 bit key or AES 256.

Passwords are salted & hashed using SHA-256.

**iMPACT Big Data**

Firewall & Private Subnets block unwanted access to our environments.

Data Transfer using TLS 1.2 Connection or greater

**HP Piazza**          **HP Site Flow**          **PrintOS**

Access to data is protected via strong authentication, authorization, account management and audit logging.

Warehouse Data Transfer using TLS 1.2

Connection Order Artwork Transfer using TLS 1.2

**Connection**

**Customer Network / Firewall**

| HP Press/Printer | HP DFE/RIP | Customer PC | Tablet | Smartphone | Brands/PSP/ Print service providers ERP Systems |

# 4   HP Security Standards

HP works to maintain the highest standards of security in order to protect your information. When data is sent to the HP Site Flow or HP Piazza cloud solutions, users can be assured that HP has done everything possible to safeguard the information in its possession. In order to meet the growing demands and challenges of the modern cloud environment. HP is constantly monitoring and improving the applications, systems, and processes critical to the HP Site Flow solution.

From secure and highly available data centers to strict adherence to security monitoring and management, HP applies a layered approach toward protecting your information and your print business.

## 4.1   Secure and highly available data centers

HP's security strategy focuses first and foremost on the data centers that house your information. While you cannot visit the data centers that HP uses to house the HP Site Flow platform, our vetting process verifies that these locations are audited and certified by third- party agencies. The data centers have achieved ISO 27001 certification and are validated as a Level 1 service provider under the Payment Card Industry (PCI) Data Security Standard (DSS). In addition, the data centers undergo annual SOC 1 audits and have been successfully evaluated at the Moderate level for Federal government systems as well as DIACAP Level 2 for Department of Defense systems. Data centers are staffed 24x7 by trained security guards; and access is authorized strictly on a least privileged basis.

## 4.2   Compliance framework

HP's adherence to global standards makes it easier for you to comply with your own national and regional requirements. We maintain a dynamic compliance framework by tracking and anticipating evolving standards and regulations. The HP Site Flow compliance framework has been designed to consistently address multiple certifications, regulatory requirements, and third-party attestations.

HP complies with the EU-US Privacy Shield Framework as set forth by the US Department  of Commerce regarding the collection, use, and retention of personal information from European Union member countries. HP has certified that it adheres to the Privacy Shield Principles of Notice, Choice, Accountability for Onward Transfer, Security, Data Integrity and Purpose Limitation, Access and Recourse, Enforcement and Liability.

## 4.3   Secure communications and data protection

To ensure a high level of data protection, HP applies multiple measures. We safeguard data    in transit by using a TLS 1.2 connection. Data at rest is stored on an encrypted file system using LUKS with a 1024 bit key or AES 256 Encryption. Passwords are salted and hashed   using SHA-256. And the PrintOS platform is required to follow a comprehensive vetting process that includes passing the internal security architecture checklist, expert code review, and vulnerability fuzz testing.

## 4.4    Secure account management and auditing

Access to your data is protected via authentication, authorization, account management, and audit logging. These factors are evaluated as part of the architecture security review process.

HP maintains detailed audit logs that capture such data elements as account name, date, and time stamp, as well as activity performed. Access to the database is limited to authorized personnel only. And audit logs are regularly backed up and maintained.

## 4.5    Data privacy

HP has a documented and published privacy statement that  strictly prohibits the sale, rental, transfer, trading, or disclosure of personal information to third parties. HP's privacy standards are global and accessible on the PrintOS website or by visiting hp.com/go/privacy.

## 4.6    Secure Content Storage

All assets associated with orders are transmitted and stored in encrypted form. They are decrypted only for processing and after downloading to production equipment. Access    to these assets is protected using authentication, authorization and audit logging. All changes to the assets in the secure content storage are controlled by authentication and authorization and logged in audit records. Some of these records even hold non-repudiation characteristics and blockchain protected features.

## 4.7    Disaster recovery and backups

Information is an asset that must always be available. HP Site Flow runs in an industry  leading cloud design, providing physical and logical redundancy at every layer. Each layer of virtualization is redundant to provide high availability and scalability.

## 4.8    Security monitoring and management

We also keep your information from falling into the wrong hands. Firewall and private subnets block unwanted access to our environments; and our intrusion detection systems work around the clock, providing high levels of protection for customer data. HP regularly reviews the environment for application and infrastructure vulnerabilities; and, in case of an incident, our incident response team engages to help resolve the situation.

## 4.9    HIPAA safeguards

HP is a Business Associate for many of the country's largest healthcare providers and has fully implemented all HIPAA required physical, technical, and administrative safeguards. HP's Privacy by Design approach provides HP with a solid compliance foundation. Before using a third party to provide solutions or services (e.g., cloud service providers; onsite repairs), HP ensures that the appropriate due-diligence and HIPAA required agreements have been completed. An ongoing collaborative effort between HP HIPAA certified professionals, Sales, Service, and R&D teams helps

ensure that HIPAA compliance risks are identified and mitigated, and appropriate training is provided to all resources who may access Protected Health Information.

## 4.10  Binding corporate rules

HP has also established a set of binding corporate rules (BCR), which have been approved by all Data Protection Regulators in the European Economic Area (EEA) and Switzerland, effective June 2011. The BCR ensure that personal data of covered individuals in the EEA is adequately protected while being processed by any of HP's global entities.

# 5   Availability

Because your information and your business are valuable to HP, site availability for HP Site Flow cloud platform is no less than 99.9%.

As with any software as a service (SaaS) application, HP will occasionally have planned downtime for maintenance or to improve, add, or remove features or capabilities we believe are right for our business and customers. Planned downtime for these reasons is not  included in the calculation of the HP Site Flow solution availability.

HP Site Flow solution availability also does not include unavailability of the service caused by circumstances beyond HP's control. These exceptions include, but are not limited to, failure of computer infrastructure systems at a customer's place of business or defects in the transmission of any information caused by acts of God, acts of government, flood, fire, earthquakes, civil unrest, acts of terror, strikes, or other labor problems.

HP will use commercially reasonable efforts to schedule and notify customers of all planned downtime.

# 6   Conclusion

Just as the cloud is creating new opportunities in the way we deliver and consume technology; HP Site Flow is transforming the way print service providers —small and large— run their business and generate profit. Differentiating the HP solution is the extent to which we go to make sure your data and systems are secure for as long as you use the solution. With confidentiality, data protection, and availability at the heart of our security strategy, you can trust HP and the HP Site Flow and HP Site Flow families of products to help safeguard your information and your business.

# 7   Learn more at

hpsiteflow.com

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