The PSN to Cloud Transformation in the Public Sector

Securely transition to cloud based services

The Cabinet Office on the future of the PSN

In 2017, the Government recognised that significant technology advancements mean the PSN is no longer the most appropriate or cost effective option. There is a desire to ultimately move workloads across the Internet and make better use of cloud technologies to reduce costs and support the digital first agenda. This stance was first communicated in January 2017 by James Stewart who was at that time then Director of Technical Architecture & Head of Technology at GDS in his much commented blog post "The Internet is OK". It has subsequently been amplified by statements and activity driven out of both GDS and the Technology and Digital Leaders Network (TDLN).

The requirements and criticality of compliance and assurance however remain. With common encryption technologies such as Transport Layer Security (TLS) coupled with strong business practices underpinned by the likes of ISO:27001, it has opened up the discussion about exploiting cloud-based services.

The Cabinet Office's desired end-goal is to remove the physical PSN Network due to the cost of upkeep. They are also seeking to transform how services are delivered as they seek to deliver on the Government Transformation Strategy. As noted in the February 2017 policy paper "This is no easy task. Government is more complex and wide-reaching than ever before."

"The imperative is to change, therefore - and to do so at pace and at scale. This is the meaning of transformation. It is in essence a change of working, of culture and of disposition - changes that are made possible by digital technology. That technology is not change itself; it enables the change that is so transformative."

The Rt Hon Ben Gummer
Former MP - Minister for the Cabinet Office
and Paymaster General

Cloud transformation and the Public Sector

Transitioning to cloud based services will take time given the number of connected consumers and service providers. During this transition, there is a need to be able to communicate from the old world to the new world.

There are ever increasing gaps forming between Government organisations and the industry trend towards 'everything cloud' and on-demand service consumption.

All organisations whether in the public or private sector need to be more agile, competitive, cost conscious yet relevant. They need to be able to flex as the globalisation of services continues at pace. This utilitarian approach to enterprise service consumption, long established in the consumer market, is driving and changing the competitive landscape.

The stated Government objective of 'cloud first' provides UK Government agencies and partners with a clear directive for innovation of their organisation and services - but where do these departments and agencies begin?

The challenge of transitioning services from the PSN to cloud provision requires flexibility, control, security and visibility and this is only possible with a service that can connect with the PSN to multiple cloud providers.

What is needed is a platform that encrypts network traffic, manages its movement through a central enforcement point, from the business to any or many cloud service providers, including the PSN, seamlessly without compromising on security, flexibility and without introducing unnecessary cost.

It's imperative that the transition can be made without disruption or impact to users.

The challenges of transitioning from the PSN to the Cloud?

Service provider

- Needs to continue providing the service
- Needs to migrate to the cloud
- May need to be able to continue interacting with other services on the PSN
- May not be able to move the entire service in one go

Service consumer

- Needs to continue consuming services on PSN
- Needs to maintain their own PSN Compliance
- Needs to be able to access cloud service providers as well as PSN service providers
- May need pan-Government access

The service consumer

As a government consumer of the PSN or PSN Services, you need continued, secure access to all of those services throughout your transition to a non PSN environment. You also need the flexibility to consume new services, some of which may need access back into the PSN. This requires a 3 phase approach.

Phase 1 - Connect

Phase 1 is simply connecting your access to the PSN, the internet and any cloud service provider and put your organisation in the prime position to start your transformation. You will need a provider who offers an agile and secure connectivity platform for continuous service provision.

Phase 2 - Transform

Move specific applications and services or whole connections through your new secure and flexible platform to your cloud service provider of choice. All of this is transparent to your users, their service consumption will remain unaffected throughout the whole process.

Phase 3 - Agile Network

All connectivity, applications and services you needed to transform will have been completed achieving your target end-state - a secure flexible Agile Network. Working with NCSC and other appropriate agencies you are assured that your platform will provide current and future security and assurance compliance.

The service provider with many consumers

As a service provider to many consumers on the PSN or potentially providing many PSN services, you need to be able to continue to provide those services whilst migrating to a more sustainable or alternative platform to PSN, typically public cloud. Your customers need the flexibility of continued access whilst you migrate to other services both inside and outside of the PSN.

Phase 1 - Connect

Phase 1 is simply connecting your access to the PSN, the internet and any cloud service provider to put your organisation in the prime position to start your transformation. You will need a provider who offers an agile and secure connectivity platform to protect your consumers for and continuous service provision.

Phase 2 - Migrate

Move specific applications, services or connections through your new secure and flexible platform to your cloud service provider of choice. This transition activity or programme should occur with no service impact or interruption for your users. Work with your platform provider to ensure continuation of services.

Phase 3 - Close

Whilst your consumers are using the PSN to connect to your services, your chosen platform provides the required connectivity, security, traffic inspection and policy compliance. Once service transformation is complete and all of your consumers can access services via the internet, you can choose whether to retain your platform to support your continuous or future change programs.

The service provider with a few consumers

As a service provider to a few or possibly only one consumer on the PSN, you need to be able to continue to provide those PSN accredited services whilst migrating to a more sustainable platform, typically cloud. You need the flexibility to be able to migrate whilst being able to communicate with other services both inside and outside of the PSN.

Where you only have a limited number of consumers, or more likely a single consumer, you may be in a position to leverage an existing secure connectivity platform as deployed for your Government customer.

Connect to consumer

Your provider must connect you to the Service consumer's connectivity platform, meaning that you can remove your own PSN connectivity, and you can have a platform to immediately migrate from your current service provision to cloud if required.

Connect the old world to the new world

with Cloud Gateway

Cloud Gateway is built on the foundation of security, visibility and flexibility. It is the cornerstone of the 'Agile Network'. It securely enables transformation and facilitates change. Cloud Gateway was built to provide both PSN connectivity and multi-hybrid cloud connectivity. It is designed to meet and indeed exceed the required Government standards whilst fully exploiting best practice for data handling, data transfer and business processes. Through this intelligent and informed design Cloud Gateway provides an 'out of the box' secure pathway for services to transform from the PSN to cloud. It also provides the platform to deliver cross-network connectivity between PSN services and cloud services allowing 'real world' transition, transformation and service continuity. Cloud Gateway can deliver a platform that replaces the PSN whilst being able to meet all of the necessary security standards in the process.

The Cloud Gateway platform is a true, Agile Network. It has the ability to deliver for the 'now' whilst being able to immediately cater for the future. It is a unique platform that evolves, something never before achieved by any network infrastructure. This is key in addressing the requirements as known today, the requirements envisaged tomorrow and those that are yet to be foreseen.

In simple terms it provides a platform between traditional networking infrastructure and cloud services. Furthermore it provides a central management and reporting platform ensuring compliance, cost control and security.

The platform encrypts network traffic, manages its movement through a central enforcement point, from the business to any or many cloud service providers, including the Public Services Network (PSN), seamlessly and without disruption or impact to users.

The award winning platform (SVC PaaS Innovation of the Year 2018) is listed on both G-Cloud and DOS frameworks with Crown Commercial Services. The entire platform was accredited for PSN in 2018 for multiple public and private cloud service providers.

Cloud Gateway's solution

Hybrid Cloud Connectivity Platform (PaaS)

- Delivering secure connectivity between your Organisation, the PSN, any cloud service providers and the internet

- Providing secure connectivity between everyone on your estate

- Enabling you to rapidly add, change and remove cloud service providers, connectivity providers or methods, sites or users

- Enhancing your visibility protecting you from cyber threats and compliance failings and giving you the power to act where necessary

- Reducing costs immediately by consolidating what you have and preventing unnecessary spend by expediting what you need

- Ensuring built-in flexibility to address continuous and future change

Securely and rapidly connecting everything on your estate with multiple cloud service providers, the PSN, the HSCN and the internet.

Crown
Commercial
Service
Supplier

Cloud Gateway, our award-winning hybrid cloud connectivity platform, is a Public Services Network (PSN) accredited platform-as-a-service (PaaS).

It gives you access to your current and future Cloud services whilst preserving the backbone pan-Government PSN connectivity.

It provides the transition path and end-state architecture to allow you to transform at a pace that suits your organisation.

Speak to the Cloud Gateway team about your transformation plans and a networking expert will guide you through the right solutions for you.
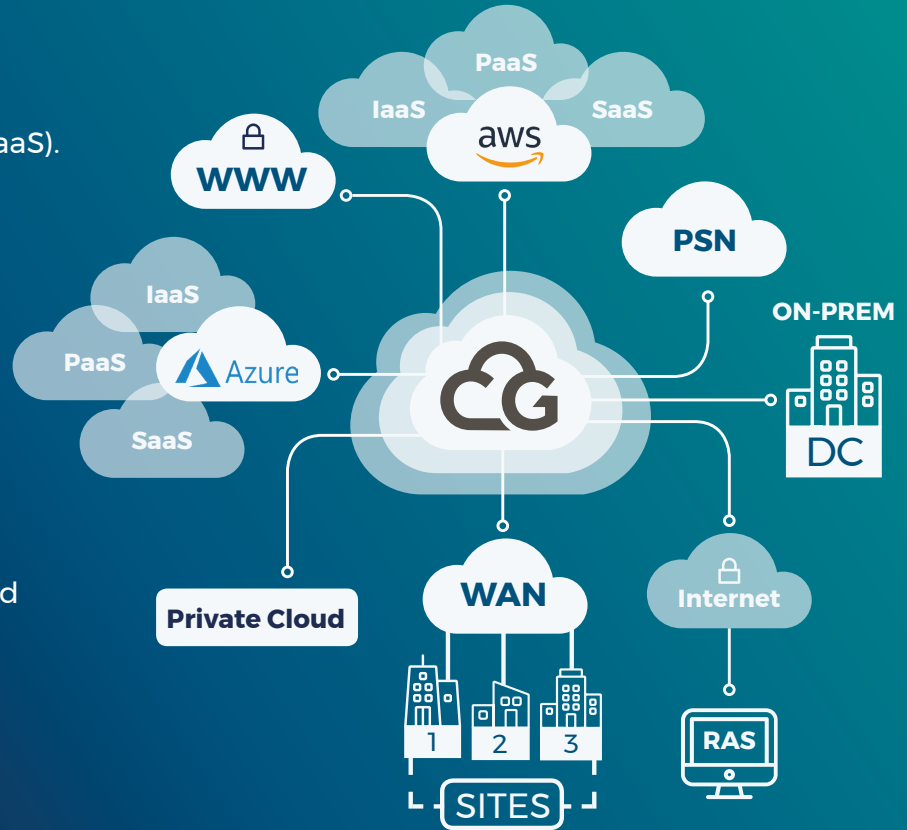
About Cloud Gateway

Cloud Gateway offers a hybrid cloud connectivity platform (PaaS) which securely connects anything on your estate with multiple cloud service providers, the PSN, HSCN and the internet.

The Cloud Gateway platform consists of three core products: PRISM, PRISM Lite and Simply Connect, all designed to allow organisations of any size to harness the power and flexibility of hybrid cloud and multicloud but with greater control, pace and visibility. Cloud Gateway secures all your internet and network traffic, with built-in flexibility to address continuous and future change and reduce your operating costs. By centralising connectivity, organisations have a single, timely and accurate source of truth, ensuring regulation and legislation compliance and protecting you from cyber threats.

Visit us at **www.cloudgateway.co.uk**
Contact us on **info@cloudgateway.co.uk**
Twitter: **@cloudgatewayltd**
LinkedIn: **linkedin.com/company/cloudgateway**