

# Mass Migration to AWS for Renewable Energy Leader



## Profile

As a publicly-traded, global solar innovation leader, this company has among the largest U.S. installed solar energy bases. The enterprise holds more than 200 patents for solar technology which it designs and manufactures. Residential, business, government and utility customers rely on the company's quarter-century of experience and guaranteed performance to provide maximum return on investment throughout the life of the solar system.

## Challenge

This renewable energy leader had two parallel goals it wanted to achieve. First, it wanted to use cloud migration as an opportunity to overhaul its business processes. Among the benefits they hoped to achieve were increased developer agility, global access for their workers and to save on capital expenses. Additionally, Amazon Web Service's data center had certifications this company did not currently have. Secondly, in the migration process, this organization looked to build standardization.

## Solution

There are two general approaches to AWS migration — lift and shift and application transformation. With a desire to move the enterprise wholesale to AWS, the teams all agreed that a lift and shift or migration factory approach would be most successful. The teams also agreed that following the migration, IT transformation could certainly be pursued, especially once standardization had been achieved.

The project began with Flux7's AWS migration experts reviewing critical data about the applications to be moved, and designing push-button deployment frameworks which were then used to quickly select and stand up new environments, allowing the client's DevOps team to focus their efforts on specific applications and not the foundational policies that are part of the AWS automation.

First, Flux7 AWS experts consulted with the organization's director of IT to develop a plan as to how to migrate to the cloud. The plan needed to address several points of corporate policy and security including using VPN connections and a VPC. With this requirement in mind, the plan was to move one application at a time into Amazon Web Services, starting with a residential solar monitoring Web app.

To start, the database and API server were hosted on-premise and connected to the VPC through a VPN tunnel. Instead of creating a VPN tunnel for each new VPC, the Flux7 experts used the new AWS Transit VPC.

This helpful network allowed Flux7 to connect multiple VPCs to a common VPC that serves as a global network transit center. In the process, network management was simplified and the number of connections they needed to set up and manage was decreased. Flux7 set up the AWS Transit VPC by setting up a virtual soft router in which new VPCs automatically connected to the router and new routes were propagated using Border Gateway Protocol (BGP).

Security was also a distinct consideration, with thought given to security policies, controls, and permissions. In order to introduce standardization and maintain separation of duties, the Flux7 team introduced a service catalog, where 80% of applications were able to be defined by a small number of templates. Moreover, the service catalog was a good way to limit less advanced teams to just instantiating service catalog products. In this way, the energy company was able to standardize builds with security controls built-in, encouraging best practices to be followed by default. And, in order to streamline development and operations (DevOps), AWS was used to create multiple environments for each team, increasing speed to market and operations efficiencies.

## Benefits

In the process of migrating its applications to AWS, this renewable energy company has increased automation, security, and standardization. Its business-critical monitoring application is increasingly automated and more monitoring features provide the distributed team with access to up-to-date information. Moreover, the team has made deep improvements to its disaster recovery, building multi-region DR deployments for advanced reliability. Last, this organization has experienced significant gains in developer efficiency as facilitated by services, catalog self-serve IT and the team having created 'boilerplate' code useful for development teams. All told, the migration to AWS was a true success with Development, Operations, and Security all singing the benefits.

## About Flux7

Flux7, an NTT DATA Company, is an IT services firm that helps enterprises reduce the complexities of a new or evolving cloud automation strategy. Agile and DevOps-native, Flux7's robust services portfolio prioritizes a fast path to ROI that meets the immediate needs of technical and innovation teams focused on transformation while forging a secure and stable pathway for security and operational excellence. Learn how Flux7 helps businesses bring solutions to market faster at <https://www.flux7.com>