CAPNEXUS | aws

AWS ADVANCED TIER SERVICES PARTNER
CLIENT SUCCESS STORY



CASE STUDY

Water 365 Application Built on AWS Streamlines Slow and Laborious Shipment Process for Select Water Solutions

A serverless AWS platform for self-service shipment requests and real-time tracking, on web and mobile

CLIENT
Select Water Solutions
Water and chemical solutions for energy

PLATFORM
Water 365
Web + mobile shipment portal

AWS SERVICES
Lambda · API Gateway
Step Functions · DynamoDB · Cognito

PARTNERS
CapNexus
+ AWS Professional Services

SECTION 01

Executive summary

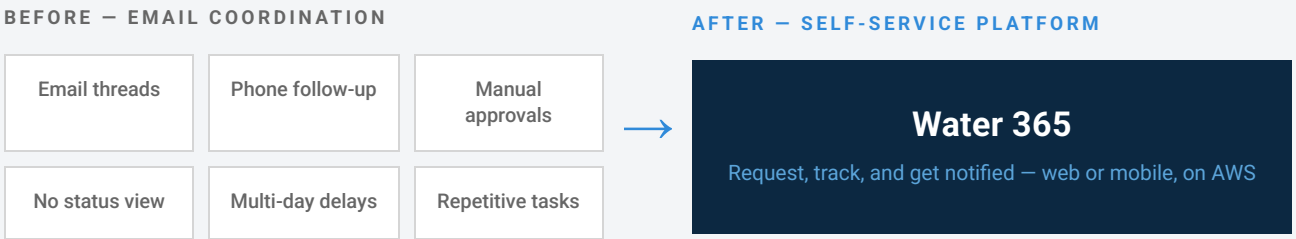
CapNexus implemented, delivered, and continues to support production-ready web and mobile applications for Select Water Solutions, built on AWS services. The **Water 365** application lets Select customers securely request and monitor product shipments from their phone or browser.

It replaced a manual, email-driven coordination process that pulled in dozens of customer and support representatives. Requests that once took days now move in near real time, with automated status notifications to customers and administrators alike.

SECTION 02

The challenge

Coordinating a shipment meant an email thread, often across dozens of customer and support representatives, producing multi-day delays, inefficiency, and inconsistent communication on both sides. The legacy process had no automation and no centralized integration for shipment requests, real-time updates, or user authentication, so support teams absorbed the repetitive work and customers had no visibility into status.



WHAT SELECT NEEDED

- A secure, self-service platform on both web and mobile
- Automated notifications for customers and administrators
- Managed authentication and administration of user access
- Real-time shipment tracking for customers
- Centralized integration with inventory and shipment systems
- Headroom to scale seamlessly with business growth

SECTION 03

The solution: Water 365

Working alongside AWS Professional Services, CapNexus designed and implemented a ***serverless architecture aligned with AWS best practices*** with Lambda as the primary compute service.

Lambda functions behind Amazon API Gateway form the backend API layer, handling user requests and orchestrating communication with Select's inventory and shipment management platforms, Microsoft Dynamics 365 and Shipwell.

Water 365

Serverless shipment platform · AWS-native

Lambda + API Gateway

Step Functions notifications

DynamoDB shipment data

Cognito authentication

Dynamics 365 + Shipwell integration

CORE COMPUTE

Lambda as the primary compute service, enabling event-driven workloads and API integrations

DATA MANAGEMENT

DynamoDB captures user information and auxiliary shipment data not held in Dynamics 365

SCALABILITY AND SECURITY

Serverless scaling with AWS Cognito for secure user authentication and administration

EVENT-DRIVEN WORKFLOWS

An Amazon Step Functions state machine coordinates multiple single-purpose Lambda functions to deliver real-time notifications to customers and administrators

SECTION 04

From request to delivery

Every step that used to live in an email thread now runs as an event in the platform. A customer submits a request from their phone or browser; the API layer validates it, integrates with Select's systems of record, and an event-driven workflow keeps both sides informed until the shipment lands.

THE WATER 365 WORKFLOW

01 Customer signs in through AWS Cognito on web or mobile

02 Shipment request submitted through the self-service portal

03 API Gateway routes the request to purpose-built Lambda handlers

04 Lambda orchestrates with Dynamics 365 for inventory and orders

05 Shipwell integration coordinates transportation and carrier detail

06 DynamoDB stores user and auxiliary shipment data

07 A Step Functions state machine drives the notification workflow

08 Administrators review, approve, and track activity in one place

09 Customers receive automated status updates in real time

10 Serverless scaling absorbs demand as adoption grows

Serverless application core

Lambda behind API Gateway carries the platform's business logic with no servers for Select to patch or scale — capacity follows real customer demand.

Integration with systems of record

Dynamics 365 and Shipwell remain the authoritative inventory and shipment platforms; Water 365 orchestrates them rather than duplicating them.

Secure access at scale

Cognito handles authentication and user administration, so new customer groups can be onboarded without bespoke identity work.

SECTION 05

Outcomes and success metrics

The Water 365 application replaced a slow, email-based shipment coordination process with a secure, self-service system. Customers request and monitor shipments in real time; Select administrators approve and track activity efficiently.

Improved speed

Requests that previously took days are now processed in near real time.

Enhanced visibility

Customers and administrators receive automated notifications on shipment status and updates.

Positive adoption

Initial customer feedback has been highly positive, with rollout continuing to additional customer groups.

Support that continues

CapNexus continues to support and expand the solution as Select Water Solutions grows customer adoption.



Select Water Solutions coordinates product shipments across a nationwide customer base — now requested and tracked from a phone or browser.

SECTION 06

Lessons learned

> A key lesson was the importance of capturing feedback from end users early in the process. While the solution was designed in close collaboration with Select's field teams and internal support staff, the most valuable input came from Select's customers once they began using the application.
>
> This feedback led to improvements in UX workflows and the prioritization of powerful new features, such as real-time chat between customers and admins and additional tools for post-delivery product monitoring. Engaging external customers earlier would have accelerated these improvements and enhanced the initial launch experience.
>
> CAPNEXUS ENGINEERING TEAM

SECTION 07

Why CapNexus

CapNexus did not hand off at launch. The same team that designed the architecture alongside AWS Professional Services built the web and mobile applications, took them to production, and continues to support and extend the platform as adoption grows.

- ✓ AWS-native serverless architecture and delivery
- ✓ Web and mobile application engineering
- ✓ Identity and access management with AWS Cognito
- ✓ AWS Professional Services collaboration
- ✓ Enterprise integration — Dynamics 365 and Shipwell
- ✓ Ongoing managed support and platform expansion

SECTION 08

Plan. Deliver. Run.

From architecture through production support, CapNexus turned a manual, email-driven shipment process into a self-service platform Select's customers use every day and continues to grow it with them.

PLAN

Serverless architecture designed with AWS ProServe and Select's field teams

DELIVER

Web and mobile applications, event-driven notifications, enterprise integrations

RUN

Ongoing support, customer rollout, and continuous feature expansion

STRATEGIC AWS PARTNERSHIP

CapNexus + AWS Professional Services, operating as one delivery team

Designing alongside AWS Professional Services kept the architecture aligned to AWS best practices from the first sprint; Lambda as the primary compute service, event-driven workflows for notifications, and managed services wherever they removed operational burden from Select.

The result is a platform that scales with customer adoption instead of against it, and a delivery relationship that continues past launch; supporting, extending, and prioritizing new capability as Select's customers ask for it.

CAPNEXUS

aws PARTNER Advanced Tier Services

Plan. Deliver. Run.

AWS Advanced Tier Services Partner

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