



## Providing Superior Services to New Yorkers Through the New York State Excelsior Cloud

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State: New York  
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## Executive Summary

In 2012, New York State Governor Andrew Cuomo issued a mandate to consolidate the state's sprawling IT services using the "all-in" approach. All of the state's 46 agencies were using their own IT systems, and information was harbored in 53 data centers across the state. Every agency had its own contracts, strategies, IT architectures, and standards.

Governor Cuomo understands that technology is horizontal in that it is used across all of the state's agencies and that, because of that, it is transformational; a powerful and truly effective tool for improving the lives of all New Yorkers.

Following those guiding principles, Governor Cuomo directed the creation of the Office of Information Technology Services (ITS) where all of the state's technology decision-making, standards, operations, and strategies were consolidated. One of ITS's initial charges was to consolidate the state's disparate data centers under one roof. ITS has now consolidated fifty-three data centers into two; one primary and one back-up.

This consolidation paved the way for the state's private cloud platform, the New York State Excelsior Cloud. Development on the New York State Excelsior Cloud began in May 2017 and the platform was launched in at the end of 2017.

Today, the New York State Excelsior Cloud is revolutionizing the way the state's citizens interact with their government. It is the foundational platform for IT services across all of the state's 46 agencies, including the Department of Motor Vehicles, Office of Children and Family Services, Higher Education Services Corporation, and more. The New York State Excelsior Cloud has been instrumental in increasing access to services such as education, health care, benefits and public safety, improving the State's cybersecurity posture, and enhancing New Yorker's everyday lives.

## Concept

While data center consolidation is a top priority for many state governments, few have addressed the challenge with the fervor and success of the state of New York.

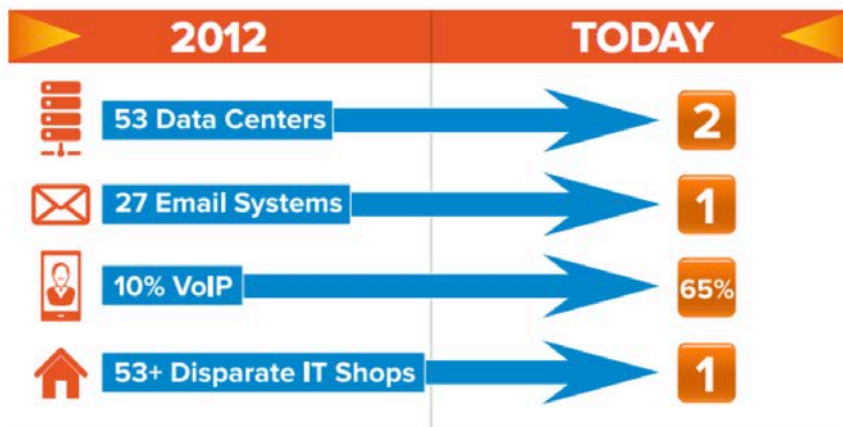
Over decades the state's IT infrastructure grew to include 53 data centers and 27 different email systems managed by 37 CIOs, all operating independently of one another. Each of these "assets" powered the state's 46 agencies. But the process was siloed, costly, and inefficient. Above all, it was an impediment to the state's ability to fulfill New

York CIO Robert Samson's goal to deliver "innovation that matters to all New Yorkers." Achieving that level of innovation required getting everything on an efficient, effective and flexible platform – the New York State Excelsior Cloud – but much groundwork had to be covered before that vision could come to fruition.







The journey began on November 22, 2012 when Governor Cuomo virtually consolidated 4,000 IT-professionals and \$1 billion of IT spend, spread across all of its agencies, under the umbrella of the ITS. ITS now sets statewide IT strategic direction, directs IT policy and delivers high quality IT services to over 40 executive agencies, which collectively serve more than 19 million New Yorkers. It is the home to approximately 4,000 IT professionals and, in addition to catering to the citizens of New York, provides services to more than 140,000 state employees. The formulation of ITS was a necessary first step for New York State to build a platform like the New York State Excelsior Cloud.



ITS's Albany Data Center



Before ITS could build the New York State Excelsior Cloud it had to consolidate the state's 53 disparate data centers. A key milestone took place in 2013 when the State entered into an agreement with the State University of New York to lease 33,000 square feet of Tier 3+ rated data center space on a SUNY campus in Albany. Today, the SUNY data center houses 22,000 servers, manages 25 petabytes of data, and connects to 1,600 miles of fiber optic cable. Today, ITS backs up more data every night than the entire country of Canada.

-  • **1,400 miles of fiber-optic cable**
-  • **25 petabytes of storage**
-  • **70,000 VoIP phones, 27,000 mobile phones**
-  • **93,500 workstations, laptops and tablets**
-  • **10,000 servers -- virtual/real**
-  • **1 Petabyte of monthly network traffic to/from Data Center**

### **Data Center Consolidation Leads to the Creation of the New York State Excelsior Cloud**

This massive consolidation effort positioned New York State to build its New York State Excelsior Cloud, one of the largest private cloud implementations for state government in the United States. Similar state cloud efforts are dwarfed by the sheer size and capability of New York's private cloud platform -- the underlying infrastructure powering services for 46 of the state's executive agencies.

The concept behind the New York State Excelsior Cloud is based on a single question: "How do we change the trajectory of government so that it works smarter and more efficiently for all New Yorkers?" The New York State Excelsior Cloud is the culmination of ITS's efforts to provide innovative ways for citizens to benefit from government programs. In the words of Samson, ITS wants "to get agencies to stop thinking and worrying about the infrastructure and focus on the application of technology as it relates to what they do." (*Government Technology*, "New York State CIO Bob Samson on the Benefits of a Massive IT Consolidation," December 2017)

This can be a challenge when managing one or two agencies, let alone 46. Each of those agencies offer different services that the New York State Excelsior Cloud must be able to support and deliver, quickly and reliably. Providing the appropriate services and technology support for each of these agencies is a daunting task. To address this challenge, ITS adheres to the following principles:

- 1. Be client-centric.** The ITS team treats each agency as a separate client. They work hand-in-hand with the agencies by asking about their unique challenges and developing ways to solve those problems. The New York State Excelsior Cloud was built to be open and flexible enough to accommodate each agency's unique needs.
- 2. Be skills-based.** Samson has often said that technology is only as good as the people that work with it, shape it, and have the skills to apply it in innovative and creative ways. To that end, all members of ITS are extensively trained not only on the New York State Excelsior Cloud platform and other technologies, but also on the intricacies of working with their agency clients.
- 3. Be process-driven.** ITS's clients face challenges that demand expert services that ITS serves from various "centers of competence." The centers of competence cover critical subject areas such as security and solutions architecture. . The ITS team has developed proven and repeatable processes that can be used in a turnkey manner to deploy these expert skills.

## Significance

A key driver of the New York State Excelsior Cloud is the ability to provide New Yorkers with the services they need in the ways they have become accustomed to from other types of online transactions. Information must be provided quickly and in a user-friendly manner, similar to an Amazon shopping experience.

Prior to the establishment of ITS and the New York State Excelsior Cloud, individuals were required to visit separate agencies to get what they needed. This arduous process forced users to, at best, navigate difficult to use web interfaces or, at worst, pick up the phone or visit an office in person.

The New York State Excelsior Cloud makes things much easier by enabling technology services that citizens can access simply. For example, My.Ny.Gov., which is powered by the New York State Excelsior Cloud, provides a one-stop portal for citizens, businesses and state employees to easily and securely access government agencies and services. The site was designed in conjunction with CA Technologies, and it supports a Single Sign-on Authentication security portal. This progressive identity management approach results in the identity of the user becoming the new ITS security perimeter.

Access	Convenience	Security
<p>Many government services are now available online. Just a few examples: MyDMV, Tax Online Services, Unemployment Benefits etc.</p> <p>An NY.gov ID account provides secure electronic access to these services.</p>	<p>Access many online services with a single NY.gov ID account.</p> <p>Having a NY.gov ID account means only one user ID/password to remember, and being able to access participating online services anywhere, anytime.</p>	<p>The NY.gov ID Program protects you against unauthorized access to your information.</p> <p>NY.gov ID uses technology, policies, and a network of support to prevent unauthorized access to confidential information.</p>

### NY.gov -- Powered By Excelsior Cloud

## Impact

The creation of ITS as a single technology organization for all New York state agencies, the consolidation of 53 data centers into two, and, in particular, the implementation of the New York State Excelsior Cloud have created significant and tangible benefits for New Yorkers.

### Faster Access to the Things People Need

In addition to consolidating services under the My.Ny.Gov portal, a single portal through which citizens engage with different agencies, the New York State Excelsior Cloud has made it easier for users to get what they need, faster. For example, car dealers and fleet managers applying for vehicle titles used to have to go through a cumbersome and manual process. That process has now been automated through the New York State Excelsior Cloud. Users simply need to log onto the MyDMV section of the portal, go through a few steps, and request the title -- a simplified process that saves an enormous amount of time and headaches.

The DMV is one of a host of agencies that people can access quickly and effectively and all of it is made possible through the New York State Excelsior Cloud-based portal. Users can also access information related to unemployment benefits, pay their taxes, find information on health and human services programs, apply for teaching certificates, and more.

### The Excelsior Scholarship Program

One of the most prominent programs powered by these innovations is the Excelsior Scholarship. Introduced in 2017, the scholarship allows hundreds of thousands of New York families and individuals making up to \$125,000 to apply online for tuition-free New York State college educations.

**LEADING THE WAY TO COLLEGE AFFORDABILITY**

**Apply Now!**

EXCELSIOR SCHOLARSHIP    ENHANCED TUITION AWARD    PART-TIME SCHOLARSHIP

Applications are submitted through an online application developed by ITS for the New York Higher Education Services Corporation (HESC). ITS designed, built and launched this application in conjunction with HESC over an eight-week period. Within days of its launch, the site handled 165,000 logins and tens of thousands of applications, each of which were processed through the New York State Excelsior Cloud in under 5 milliseconds. The Excelsior Scholarship program and site continues to be used by thousands of New Yorkers daily and is considered a shining example of the New York State Excelsior Cloud’s capabilities. The speed with which this application was developed, and its ability to scale up to meet the demands of the users accessing it, could not have been done without an organization like ITS and a platform like the New York State Excelsior Cloud.

### **Millions of Dollars in Taxpayer Savings**

Samson believes that, “If you spend \$1 in technology you save \$4 elsewhere in government.” The state’s data center consolidation efforts and the New York State Excelsior Cloud project prove that statement to be true -- many, many times over. Over the past couple of years, the creation of ITS, consolidation efforts, and implementation of the New York State Excelsior Cloud have, collectively, resulted in hundreds of millions of dollars in taxpayer savings.

Perhaps even more importantly, the state has become more responsive to the needs of its citizens. The New York State Excelsior Cloud enables New York to create and manage programs, such as the Excelsior Scholarship, that simply would not have been possible under the state’s old IT strategy and infrastructure. It has allowed the state to fulfill its promise of creating innovation that matters for all New Yorkers.