



Managing the Power of the Microsoft Cloud

Using the self-service capabilities of Ceryx Cloud Control™
to streamline Office 365 Management



Managing Microsoft Office in the Cloud

To capture value from Office in the cloud without risk of added expense or user frustration, companies need the sort of cutting edge tools and enterprise-class experts that Ceryx can provide.

Over the past several years, Microsoft has moved strongly towards a “Cloud First” orientation across all its product lines, including the Office Suite itself with the subscription-based Office ProPlus, and the Office 365 server-based collaboration products that complement it. The latest generations of these cloud-oriented products are quite exceptional, bringing the full power and flexibility of Microsoft’s class-leading on-premises server collaboration products directly to customers of all sizes. This creates a strong differentiator with respect to more inflexible consumer-focused competitors such as Google that do not have this pedigree.

However, the no-holds barred approach Microsoft took of fully exposing all functionality in all of its complexity, while thoroughly differentiating their cloud product, requires considerable expertise to deploy and run for all but the simplest cases. This is where Ceryx managed services and our Cloud Control technology comes in.

This white paper describes how the combination of the powerful approach that Microsoft took to cloud services combined with Ceryx’s SaaS software and closely linked managed services allow customers to fully realize the value of Microsoft products in the cloud without taking on excessive risk.

Microsoft’s First Steps

Microsoft’s initial entry into office in the cloud was indirectly by means of hosting partners. Microsoft published a short technical document in 2001 describing how Exchange 2000 can be deployed so as to host multiple companies within the same Exchange installation. Ceryx was an early adopter who used this guidance – and in fact extended it – to setup and sell a stronger enterprise-grade Multi-Tenant Exchange to smaller companies with enterprise-like requirements. This was a good complement to Ceryx’s large-enterprise Exchange managed services practice. This document from Microsoft evolved into their “Hosted Messaging and Collaboration” (HMC) initiative that cloud hosting partners used and that formed the basis for Microsoft’s own initial cloud-based offering called “Business Productivity Online Suite” (BPOS).

With momentum picking up for inexpensive cloud-based messaging offerings, Microsoft moved decisively to host their own Multi-Tenant offering side-by-side with their partners. Microsoft therefore began using their own HMC guidance to build out BPOS.

One of Microsoft’ biggest challenges was effecting the massive cultural and business pivot to move from an on-premises Enterprise focus towards a “cloud first” orientation. This was exemplified by the active tug-of-war tensions that existed between cloud requirements and enterprise requirements for the core product teams, such as Exchange. Because the cloud team was only allowed to build *on top of* Exchange, not directly *into it*, this manifested to customers as an overly-simplistic cloud experience that had none of the power and flexibility of the underlying product.

Office 365: Cloud Done Right!

After a period of some turmoil, a clear “Cloud First” strategy emerged at Microsoft as expressed by the “We’re All In” slogan from then Microsoft CEO Steve Ballmer.

As a result, all the product teams re-oriented to think cloud always, and to prioritize cloud requirements equally with on premise requirements. In the case of Exchange, Lync, and Sharepoint that meant the product teams began building scalable multi-tenancy directly into the products. This included moving the administrative interfaces to a combination of multi-tenantable web apps and PowerShell commands.

What this meant to the marketplace was that customers with complex messaging requirements of all sizes could start moving away from on-premises deployments, and start leveraging Microsoft in the cloud.

This is how the core product teams interpreted the “cloud first” mandate. They were no longer going to simplify the products for cloud consumers by building cloud support on top of Exchange as was done previously for HMC and BPOS. Rather, they were going to build cloud support right *into* Exchange. The previously dominant on-premises single-tenant use case that was Microsoft’s lifeblood would continue to be supported, but would become merely a special case of multi-tenancy. In other words, it was to be the exact same bits deployed on-premises by the customer, or into the cloud by Microsoft. The on-premises use case was realized as a locally installed Exchange system with only the one single tenant. As a result, in the cloud scenario each tenant became every bit as powerful as the most powerful Enterprise ever was before, and all that latent complexity was accessible to any-sized cloud clients via the administrative interfaces, and more complex PowerShell scripting interfaces.

This move by the engineering-minded Microsoft turned out to have been exactly what the market needed. Rather than competing with simpler cloud-based email solutions such as Google Mail on their terms, Microsoft leapfrogged to the far end of the spectrum, making the full power and functionality of their enterprise-grade products available to any-sized tenants, allowing even customers with complex requirements to benefit from Microsoft cloud services where this was not previously possible. This clearly differentiated Microsoft and fully leveraged their phenomenally successful Exchange product.

Support Implications

The approach Microsoft took, while giving customers the flexibility they craved, had implications relative to consumer-oriented email clouds that the market needed to understand.

Many things are simplified by cloud-based Exchange, but many other things are not, and customers wanting to make use of the power of Exchange found the need to continue to maintain Exchange administrators or even hire more. This is because the “face” of Exchange had become identically sophisticated for both cloud and on-premises versions. Many of the things Exchange administrators were doing before needed to still be done now, and more in the case of complex “hybrid” deployments discussed below.

Large Enterprises who were previously outsourcing their Exchange management were therefore surprised to find that moving to Office 365 from their strategic outsourcer was not simply a one-to-one change in provider. They found that part of the move included the need to hire Exchange administrators where the outsourcer had provided them previously.

While there is no longer a need for Microsoft Office 365 customers to provide data centers, purchase expensive equipment, worry about backups and disaster recovery, architect and build new Exchange environments, deploy patches, and monitor or manage the servers and software; there still remains a need to engage Exchange administrators who understand the product. While Microsoft excels at UI design, there is no “sweeping under the rug” the inherent complexity of Exchange that the customers demanded and therefore that the product teams most deliberately exposed to cloud customers as the compelling strategic advantage of the platform.

The user interface is simple enough if all the customer has is simple needs. But it’s as if an Exchange super-expert set up the software in a complex configuration, and then left the keys admonishing the customer to “please not touch anything they don’t understand.” As a result, a small company that stays away from PowerShell and the more complex screens can manage the software. However any larger organization, and many smaller ones as well, inevitably have more complex requirements that force them down this path, and thus the need for Exchange administrators.

For example, say the customer has regulatory requirements to implement a data loss protection strategy and already has tools in place whose scope includes but extends beyond email. There is therefore a need to route all outgoing mail through this tool. This can be accomplished using custom send connectors in Office 365, however a lot can go wrong in setting this up and keeping it running, and a knowledge of the concepts of send connectors, of the sophisticated Microsoft portal user interface, and of PowerShell is required.

Enter the Hybrid

Microsoft introduced the concept of hybrid Exchange to allow a company to have some portion of their infrastructure on their private networks, and other parts of it in the cloud on Office 365, and for the two to coexist as seamlessly as possible.

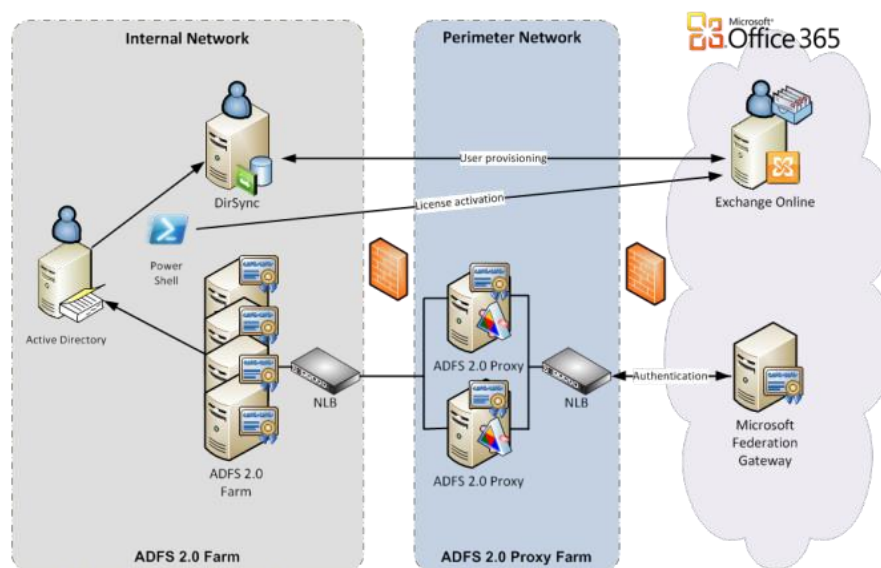
While even purely cloud-based Exchange needs Exchange administrators for all but the most simple use cases, the complexity of running the Exchange system as a whole has gone up for most organizations. It is the need for “hybrid” models that make cloud-based Exchange deployments more complex.

The main reasons for hybrids are as follows.

1. Special requirements for a subset of mailboxes that cannot be achieved in the cloud (for example, data residency requirements, or regulations that require access to servers by auditors).
2. Migrations that are too large and risky for an “everybody at once” cutover and so customers require extended co-existence.
3. Supporting active directory synchronization and/or single-sign-on.

This last requirement is not an obvious one and is the reason as to why even smaller companies feel the unexpected need to deploy in a hybrid configuration. Microsoft has a product called “DirSync” that allows companies to synchronize their local user directories into the cloud. This is a common requirement for all but the smallest companies. However, to make this work customers need to install both DirSync and a local Exchange server and then perform all administration against that local server for both local mailboxes and cloud-based mailboxes.

This situation leads a company back to using on-premises Exchange for management, and the further requirement to continue to retain Exchange expertise. Moreover, not only is the Exchange expert managing cloud-based Exchange, they are also managing local Exchange, DirSync, and optionally an ADFS 2.0 that is highly available and geo-redundant to handle single-sign-on duties. The complexity of setting this all up and then running it increases as a result.



The Workload will find its Home

Any workload, such as “email” or “conferencing” or “salesforce management”, will ultimately find its best home, be that on-premises or in the cloud, and we see the role of the partner community in general, and Ceryx specifically, to assist customers with regards to Microsoft messaging and collaboration workloads in deciding where is the right place, helping them to get there, and then managing it on their behalf while acting as their systems administrator experts for maintenance and escalations.

A customer could deploy in any of the following models.

1. On **Office 365**.
2. On a different **Multi-Tenant System** which has guaranteed data residency.
3. On a **Private Cloud** where the partner provides the data centers and equipment but dedicates the environment to this one customer.
4. On a **Managed Cloud** where the customer provides the infrastructure and the partner manages the application.

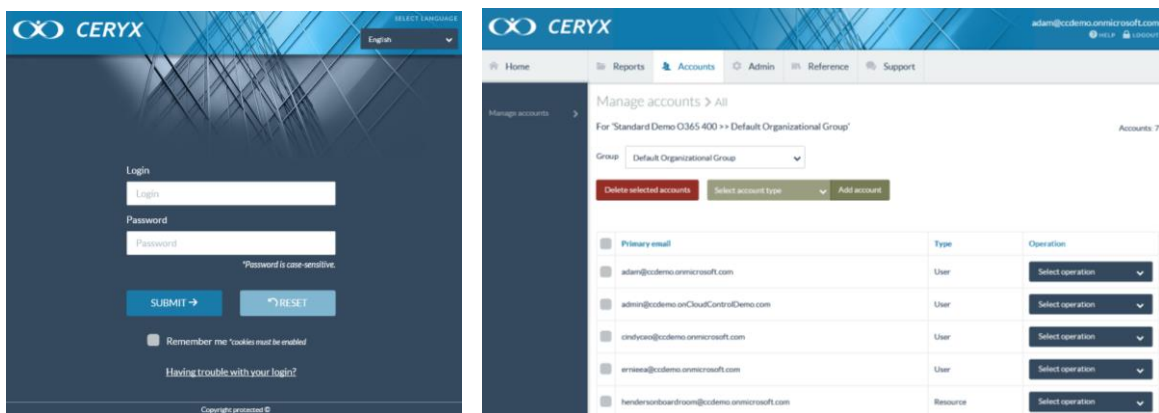
Moreover, these delivery models must sometimes be mixed and matched in very flexible ways to match the needs of the customer.

For example, a partner might deploy a company on Office 365; mix in directory synchronization, single-sign-on, and hybrid Exchange in a Private Cloud model; and further mix-in a Managed Cloud Lync implementation within the customer's own data centers.

A partner such as Ceryx with capabilities across all of these delivery models is key in helping companies get the workloads to where they belong.

Enter Cloud Control

In the case of Ceryx, in addition to being the “Messaging Experts”, our services always include Cloud Control, a web-based SaaS application that acts as an identity-and-services management platform.



Cloud Control was built for reseller partners, end-user facing help desks, and “power users” who are able to self-serve their own IT service requests. It was built to reduce the administrative burden on Exchange experts.

This capability is of benefit to the end customer in that it allows end-users and front-line help desks to do more and escalate less. Most situations can thereby be solved either by the end-user themselves, or directly on the first call without the need to escalate. This increases customer satisfaction, improves workforce productivity, and is actually more efficient for the front-line than escalating and following-up. It also removes a considerable burden from the back-end systems administrators who do not have to deal with a flood of service requests and non-server-based troubles that otherwise would plague them.

For example, Cloud Control has a simple “Test this User” function that can be applied to a user either by them self, or by the customer's help desk agent. It tests the services available to that user from an offsite location to determine if a problem is in the back-end service or not.

Status	Start Time	End Time	Tests Run	Total Tests
Success	2014-06-24 22:17:35	2014-06-24 22:22:35	6	6
Success	2014-06-09 13:25:12	2014-06-09 13:30:12	6	6
Success	2014-06-09 12:25:12	2014-06-09 12:30:12	6	6
Success	2014-06-09 11:25:12	2014-06-09 11:30:12	6	6
Success	2014-06-09 10:25:12	2014-06-09 10:30:12	6	6
Success	2014-06-09 9:25:12	2014-06-09 9:30:12	6	6

The function transparently knows where the user's service is located, what applications they have access to, and tests them. The function presents identically regardless of where that particular workload resides (Office 365, Multi-Tenant, Private Cloud, and Managed Cloud). There is no need to involve highly qualified administrators when they are not needed. In this way Ceryx can be much more efficient in its use of highly trained systems administrators while doing a better job for each customer.

Other examples of commonly used functions implemented in Cloud Control are enabling mobile devices, assigning policies to them, setting up contacts and distribution lists, editing user directory information, and much more. All of these operations can be performed by sophisticated end-users, customer help desks, or reseller partner help desks without needing to escalate higher as was previously required.

The key to this is providing an easy-to-use user interface combined with very rigorous governance controls.

The ease of use is possible because Cloud Control does not need to cover off 100% of the complex enterprise functionality. It implements in its GUI the 10% of operations that end users and help desks request 90% of the time. When we combine this capability with on-call Ceryx managed services for the rest, we offer a compelling value proposition to our customers and partners.

The governance controls include classifying users and help desks according to an assigned information sensitivity level, organizational grouping, and VIP status. We then have very fine grained role-based permissions that control who can do what to whom. There are configurable notifications when certain operations are carried out against certain classes of users, and full audit trails for everything. This enables an organization to put in place the necessary controls to keep them safe and compliant to regulations, while providing more power in a safe way to users and help desks.

The same large enterprise functionality available in Cloud Control also makes it possible for reseller partners of Ceryx to service their customers. Cloud Control defines scopes of control around groups of companies at the reseller level and below. Smaller resellers, and even larger strategic outsourcers, can centralize their help desk agents such that with only minimal training and one single Cloud Control login credential per agent they can service all the customers within their scope. Moreover, the governance

features of Cloud Control allow the reseller or, optionally, the end customer themselves, to define who can do what to whom within the reseller's escalation support structure.

The screenshot shows the Ceryx Cloud Control interface. The top navigation bar includes 'Home', 'Reports', 'Accounts', 'Admin', 'Reference', and 'Support'. The user is logged in as 'adam@ccdemo.onmicrosoft.com'. The left sidebar contains various management options like 'Manage SMTP domains', 'Organizational groups', 'Security', 'Account templates', 'Email address templates', 'Exchange', 'Address profiles', 'Services', and 'Password settings'. The main content area is titled 'Support role mapping > View' and is for 'Standard Demo O365 400'. It displays a table with columns for 'Support role', 'Permission set', and 'Sensitivity'.

Support role	Permission set	Sensitivity
Highest Support Role	Admin	Highest
Escalated	Admin	Board
Level 3	Admin	Director
Level 2	Jnr. Admin	Manager
No Support Role	Deny	Basic

At the bottom of the table, there are 'Update*' and 'Cancel' buttons.

Customers and reseller partners have the option of just using the software without Ceryx's managed services for escalations (assuming they have sufficient expertise with Exchange in the cloud themselves), or of powerfully combining the software and services.

Ceryx for Messaging and Collaboration Expertise in the Cloud

We live in a changing world where cloud-based services are coming to dominate the IT landscape. There is no doubt that more and more companies are shifting their workloads to the most efficient location, and in the case of Microsoft server-based application software, this is more and more often Office 365.

The reason that Office 365 is becoming so successful is because Microsoft got it right. They have built on their years and years of enterprise experience and brought that experience to the cloud for any-sized companies. However, with that complexity comes the need for expert partners supported by evolved technology to help customers get there and realize the cost savings.

With Ceryx and its Cloud Control software, customers realize the benefits of Microsoft's cloud without the risks and unexpected expense they might otherwise face.

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Classification: Public