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WHITE PAPER

# App data storage for personal cloud

Using NimbusBase as a solution to store  
mobile app data on personal cloud



## The rise of personal cloud

Today, the idea of saving files to a floppy disk or a hard drive is silly. It has become the accepted practice to save and back up everything to an invisible database we have come to know as "personal cloud". In fact, personal cloud has become ubiquitous; there will be around 1 billion cloud storage users by next year. We are seeing a massive arms race among various personal cloud players, from small well-funded startups like Dropbox and Box to large established behemoths like Windows and Google, to be the company that holds all your data. Even large telecoms, like Verizon and AT&T, are entering the personal cloud arena, even if to control just a fraction of their user base's data.

And it has now become easier than ever for vendors to build a personal cloud from scratch, with multiple white-label cloud companies, like OwnCloud and Synchronoss, offering pre-built cloud infrastructures that you can just slap a logo on. With the price of storage space going down as well, the personal cloud landscape should become even more competitive in the years ahead, with the promise of more free storage space to new customers and more value-add features.

## The limitation of current personal clouds: app data storage

While the abundance of personal cloud providers gifts users with tons of free storage space, easy accessibility, and a wide array of choices, these clouds also have their limitations. Currently, personal clouds are equipped to handle binary data like contacts, pictures, documents and videos. However, with the exception of iCloud and Dropbox, they're not able to store more complicated structured data, like app data. This is significant for both the cloud providers and their users because mobile onboarding with personal cloud becomes much more painless when you can switch everything, not just pics and contacts, over. Hosting app data on personal cloud (like iCloud does) opens up the possibility for users to back up things like their app preferences, game progress, to do lists and more. So while most clouds have come close to replicating most of the same features as iCloud or Dropbox, there still exists a major gap: app data transfer.

So how can upstart personal clouds match iCloud's ability to store app data and why haven't they done so already? In short, the only way is to add talent. Apple and Dropbox have teams of programmers dedicated to working on structured data storage and developer tools. However, adding such a team is cost-prohibitive for many cloud providers, since hiring the necessary talent would be too expensive. That's why it's logical for personal cloud providers to outsource some of their incremental technology- as mentioned before, many already use white label solutions for the actual storage. So it would also make sense that they use a white-label solution for platform.

## NimbusBase: The solution for connecting apps to personal cloud

NimbusBase is a white label solution for cloud providers that allows app data storage and syncing on top of personal cloud.

The core technology behind NimbusBase is the translation of data from a local mobile app so it can be written to a personal cloud. Every mobile environment has a database that developers use to store data; on iOS this is CoreData and on Android this is SQLite. Previously, cloud storage APIs have taken the approach of defining their own endpoints. This means a developer has to rewrite his storage code to take advantage of the API and store his app data on the cloud. NimbusBase has taken a drastically different approach by letting developers store whatever they want in the local database and then just scanning and sending that data to the cloud. This means there is no work on the developer end to adopt this technology.

Another one of our advantages is that our SDK is mobile based, instead of REST based. Many APIs in the last generation are geared towards web applications, so they are REST based. This means that every time a developer wants authenticate or add a file, he has to write the corresponding network calls to do so.

Our SDK works with iOS and Android, so developers can use it directly in their apps. Having a native SDK gives developers developers like authentication credentials being stored on the system keychain.

NimbusBase drives down the cost of adoption for developers to integrate personal clouds for app data storage to near zero. After a personal cloud provider integrates with NimbusBase, it can set up its own developer platform which will allow app developers to adopt the personal cloud and store their app data on there. NimbusBase allows a cloud vendor's internal and pre-installed apps to tap its existing cloud solution to create a lock-in for data (since app data is far harder to migrate than simple binary data).

## Turning standalone cloud services into app ecosystems

### Creating sticky data with app storage

Currently, personal clouds are numerous, however the features that differentiate them are few. That's probably because file storage is the main reason people use personal cloud platforms. However, that's not all users care about. Apple was the first to recognize that app data storage could also be extremely valuable to users; it allowed iOS apps to integrate and store app data inside of users' personal iCloud clouds. Because we live in a multi-device world, many Apple users now must rely on iCloud to sync their app data, like saved games or to docs, across their many devices.

App data cannot be easily moved to another personal cloud like Dropbox since structured data is stored differently. This has made iCloud indispensable to Apple users. Binary/file data, like pictures or music, is easily movable and not as "sticky" as app data. Thus, personal cloud vendors who can only sync files and not app data are at a serious disadvantage and at risk of being commoditized in the long term.

### Brand growth through app impressions

Today, when a user opens up an app, one of the first things he's bound to see is company logos, whether it's Facebook or Google or Twitter. That's because most apps allow users to log in with credentials from existing accounts. So if an app integrates a cloud vendor and allows its users to log in using the vendor's credentials, it's a huge opportunity for the vendor to get free advertising and brand recognition to all those apps' users. Imagine if the next Instagram or Evernote integrated a relatively unknown cloud..that vendor immediately has millions of impressions.

### Symbiosis between cloud provider and apps

Allowing apps to be written on personal cloud builds a symbiotic ecosystem between the cloud vendor and the app developers. On one hand, the personal cloud provider is gaining a stronger foothold in the market by having more apps integrate it, since every app leads to increased exposure and more user data stored. On the other, the cloud vendors can offer apps their network of hundreds of thousands or millions of existing users, a scale that most apps can't reach on their own. NimbusBase helps unlock the value of a partnership between a personal cloud vendor and the developer community by making cloud integration easier by an order of magnitude.

## About NimbusBase

NimbusBase provides tools to both application developers and personal cloud storage providers to make it as simple as possible to build apps on top of personal cloud. Our software allows developers to build more powerful, ubiquitous apps whose users will be able to control their data and access it anytime, anywhere. We believe that people today should have access to all their data, not just pictures or files but also app data, regardless of device or platform. NimbusBase is based in NYC and was founded in 2012.



NimbusBase

Contact us at [admin@nimbusbase.com](mailto:admin@nimbusbase.com) or [@nimbusbase](https://twitter.com/nimbusbase)  
[www.nimbusbase.com](http://www.nimbusbase.com)