

Cloud-based Authentication Service Eliminating the Need for Passwords



Charles Durkin
Co-Founder, President and Chief Executive Officer

PrivaKey, Inc.
www.privaKey.com

Contact:
Jessica Donofrio
(215) 238-0510
jdonofrio@privaKey.com

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine

CEOCFO: *Mr. Durkin, according to your site PrivaKey is a revolutionary, cloud based authentication service. How so? What is your approach?*

Mr. Durkin: PrivaKey eliminates passwords from online transactions so that users have a consistent, convenient, secure way to authenticate to any site that accepts our service. The basic premise is that it should not be so difficult to log in to websites, apps, and online services. It should be simple, convenient and secure from site to site.

CEOCFO: *It seems lots of methods have been tried over the years and nothing seems to quite get it done. How does it work with PrivaKey?*

Mr. Durkin: There has been a paradox that the security industry has been trying to solve for some time now. That is, trying to find a balance between convenience and security in online transactions. The balance has been very elusive. What we noticed Lynn, and that others have missed, is that the user is pretty much telling us what they want. What the user is telling us is that they want consistency. They want the log in transaction to be consistent from site to site, from app to app and so on. They tell us this by reusing passwords. Pretty much all users do this. They reuse passwords to create their own version of consistency, since technology has failed to deliver it. Convenience is virtually impossible if the experience is not consistent. Another question that we asked ourselves is, "Why is it easier to withdraw money from an ATM machine than it is to log in to Facebook?" It should not be this way. You use a four digit pin, and the ATM transaction is exactly the same from bank to bank. That is because the pin that you use is much different than a password. Instead of being a shared secret it is a user only secret, and it is a two factor transaction because you have the card in your hand as well. With PrivaKey, we have come up with a way to bind your identity to any device that you use; your computer, laptop, phone, tablet, whatever. You then pick a pin. That pin is not stored anywhere. Then you can use that device and pin to authenticate and log in to any site, app, or online service that accepts PrivaKey. PrivaKey behaves much like a social log in. For example, when you go to a new site and it offers the option to the log in with Facebook. PrivaKey is similarly easy, but much more secure.

CEOCFO: *Does the world trust that pins are not kept somewhere? Personally, I am very skeptical. If I put in a pin number I am assuming that organization could access it.*

Mr. Durkin: Consumers generally trust banks and they trust ATM transactions. PrivaKey technology works very much like an ATM transaction, except instead of an ATM card, you have your computer or your phone as "something you have". Unlike passwords, your PrivaKey pin is not stored anywhere. That is the fundamental difference. Your password for all of those websites, whether you use a password manager or whatever, it is stored. It is stored everywhere, and that is the foundational flaw of the password model. Our technology is much different. It is based on a cryptographic scheme where there are crypto keys on each side, but the transaction cannot be completed without the presence of that pin. The pin is a

user only pin, which makes it much different than the password. The fundamental problem with passwords and their vulnerability is that it is called a shared secret, just like the security questions you're asked when logging into your bank account. They are all shared secrets that can be socially hacked. The reason that the pin is so secure is that you are the only one that knows it. It is not a shared secret. You, of course, are entrusted to keep it secure, but you are the only one that knows it.

CEOCFO: *Where are you in development and commercialization and testing? What is going on right now at PrivaKey?*

Mr. Durkin: We are in the commercialization process. We have been through a whole range of third party audits to make sure that it is secure. We have got initial customers on the service and we are working with a number of large partners, primarily focused on financial services and cloud services. The reason we are focused on those two areas is because frankly that is where the highest risk is. If you notice, there are many things that you access online where there is a persistence in log in that your browser session might maintain and your device might maintain. If you are on a mobile device you might notice that your Facebook session is maintained and recognizes your device. However, if you go to your bank account it is going to force you enter your user name and password every time you go there and maybe even answer security questions no matter what device you are on. This is required because banking is a higher risk transaction. We are making login transactions consistent, whether you are logging into Facebook or logging into your bank. Banks, retirement accounts and similar services are where there is a very strong need for something like what we offer. It is the same thing with cloud services. This has to do with the demise of enterprise perimeters driven by the rise of cloud services. Many companies that are now using cloud services are putting a lot of corporate data out there on services like Slack, Box, and Salesforce, and they want to protect that data. We are going after those kinds of companies and trying to secure their digital identities and their transactions with one consistent way of doing it, so that users don't need a dozen passwords to access the various cloud services.

“PrivaKey is a cloud based identity service that eliminates passwords, enables multi-factor security, with the ease and convenience of a social log in. For example, a PrivaKey log in is similar to the “Log in with Facebook” option that you see on some sites, except that PrivaKey is not backed up with a password, it is backed up with a multi-factor, highly secure transaction.”- Charles Durkin

CEOCFO: *Do you anticipate that as PrivaKey is simple the public will embrace it?*

Mr. Durkin: Yes we do. That is because what we are doing is different than most of the other solutions that are out there; we are really focused on consumer or external facing sites as opposed to internal enterprise users, where solutions are forced on users. What we have seen, being in the business for many years, is that a very large majority of consumers choose convenience over security. In many ways they are enabled to do that by the rules and regulations that are in place around the financial services industry. There are a tremendous amount of losses year after year and there is really an opportunity in that. By offering something that is simple and convenient, and most importantly consistent, we think there will be a huge uptake on PrivaKey, and we think there is a huge opportunity. The other thing is that nobody likes passwords! There are 3.6 billion internet users, and we can probably count on one had the number of them that actually enjoy using passwords and managing all those passwords. PrivaKey offers a path to get away from that.

CEOCFO: *Each organization would have to get on board, let us say Facebook and your bank and the stores you shop in. Do you have to work with each of these to accept your system? How does it get from the individual to the various organizations they might want to use it?*

Mr. Durkin: That is the biggest challenge to getting it out there and getting it accessible to the external users. Our technology is based on an open standard called OpenID Connect®. Standards compliance makes for a well understood and low complexity process for sites that choose to enable the PrivaKey log in. We have set it up so that sites can self-subscribe, and start offering PrivaKey with no assistance from us. The subscribers are websites, banks, the Amazons of the world, any company that has a log in page on their website can add “Log In with PrivaKey” to it with a very simple plug-in, or a few lines of code that they need to add to it. Obviously, they need to test it and so forth, but there is no charge for you to set it up. Low volume sites can use it for free. Many low risk sites, such as media consumption; Facebook, and others can use it for free. We are going to charge for the higher risk transactions, primarily in the banking, financial services, and the cloud services sector. We will charge by transaction. The idea there is that it's a very small fee per transaction, but there are tens of billions of those transactions per day. There is a very large market. We are eliminating real losses and providing a better end user experience and ultimately eliminating passwords. Therefore, what we are counting on, as you might guess, is sort of a network effect. Once this thing gets out there to a few sites people will start saying, “Why am I still using passwords over here when I can use PrivaKey on all these other sites.”

CEOCFO: *How do you make the leap to get those few important sites to start?*

Mr. Durkin: Right now we are working with a couple of large financial services institutions. We think that is the right place to start, because people recognize and trust them. They have more advanced security than most other sites and online services. The idea is to try to get some uptake in that space and then convince others. We have another large partner we are working with, which is a huge player in the cloud services space. We plan to use this partner as a channel to get us out there and seen on sites, sort of in the model that PayPal used to get out there. It starts with making it available on certain sites where people see it and then they start saying, “Why is this not in more places,” and really try to focus on the consumer facing side. Ultimately, what we see happening is the consumerization trend where people start seeing this in the consumer space and realize that it is simpler and more secure than what they are using at work. Then they say, “Why do I still have twenty passwords at work when I am accessing my bank and all of these other sites without a password, and I now understand that it is more secure.” PrivaKey is a cloud based identity service that eliminates passwords, enables multi-factor security, with the ease and convenience of a social log in. For example, a PrivaKey log in is similar to the “Log in with Facebook” option that you see on some sites, except that PrivaKey is not backed up with a password, it is backed up with a multi-factor, highly secure transaction.

CEOCFO: *What do you understand from your twenty five plus years in technology that gives you the confidence you can do it, that you can get the attention, that you will be able to fulfill the idea? What have you learned over time?*

Mr. Durkin: What I realize is that there are some very, very difficult, challenging problems out there and most of them can be solved with innovation and with persistence. In the cyber security industry; there have been many attempts to solve the password problem. Most of these attempts have ignored the consumer and what the consumer really wants. Ultimately, it is the end user who decides what is really going to work and what is not going to work. We started with the end user and we believe that is the ultimate path to the solution. PrivaKey is a unique and disruptive innovation, and it will take persistence and much effort to achieve our end goals. It is not easy, but I have learned that if you are persistent, and you have something that is really innovative, it can be very successful!

CEOCFO: *Are you seeking funding, partnerships or investments?*

Mr. Durkin: Right now we are working on partnerships with larger companies and using the credibility that those partnerships bring to land early stage customers. Once we get those relationships built we will be looking for substantial investments. That might come from the partners or it might come from institutional and venture investors. The time frame for that will probably be later this year or early next year. We do not want to give up a lot of the company, so we need to build our valuation before we raise money.

CEOCFO: *What surprised you about this whole venture so far?*

Mr. Durkin: I think the arc of it has been surprising, because PrivaKey was spun out of another company that really focused on strong enterprise solutions. For a long time we felt that what we were doing in the enterprise space would be adaptable to the larger market. Now, when we present PrivaKey to our peers in the strong identification identity space, they look at it and they say, “How did we not see this, why is this not everywhere already.” That is almost the universal reaction! It was kind of sitting in front of us, and none of us in the industry saw it. We did this over a couple of years with an internal innovation initiative, and the fact that we got to where we are is kind of amazing.

CEOCFO: *What might people miss when they look at PrivaKey that really be recognized?*

Mr. Durkin: One thing we struggle with is just getting people to understand, ultimately the simplicity of it in terms of consistency from transaction to transaction, from site to site, from app to app. Always doing the same thing is really the key to balancing convenience and security and offering the users the opportunity to do that. The other thing they miss is how easy it is to enable the “Log in with PrivaKey” button on an existing log in screen, to really offer your users a better experience and that is really what we are trying to do.

