Securing Data for PHAs and Affordable Housing Providers

How to safeguard sensitive data from malware and third-party hacks
Yardi supports our clients with a continually updated and monitored cloud computing environment. Our award-winning service keeps sensitive information secure with multiple levels of protection.
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Cloud technology supports nearly every modern industry. It’s the safest way to store data. It’s the most convenient way to do business. It’s the most cost-effective way to mitigate risk.

Subsidized housing developers and management corporations and nonprofits are no different. Has your organization made the transition to the cloud? Hosting your data and software in-house is risky. Learn why now is the perfect time to make the move to the cloud.
The phrase cloud computing may sound ambiguous or farfetched, as if data is stored somewhere up in the sky and follows us around town all day. In reality, the cloud is just a way to help software users visualize the convenience of having their data and software available wherever they are. It’s a visual representation of servers kept secure in a remote physical location and a secure connection to users via the internet.

Examples of cloud computing are quite common, though you may not even know you are working in the cloud on most occasions. Logging into a web browser to check your email? You’re cloud computing. Checking your stock portfolio from your smartphone? Also cloud computing. Whenever you receive any piece of news or data over the internet, you are accessing that information from the cloud.

Local servers and connectivity are the alternative to cloud-based data. Examples are hardwired or wireless local area networks that keep data in-house and only available when connected to the server. Data can be synced with mobile devices periodically, but not readily available in real time.
Cloud-based software solutions and data environments are often more secure than privately hosted scenarios. Companies that host client information in the cloud are professionally dedicated to keeping up with current technology, security threats and other constantly evolving technology trends. The level of expertise held by a top cloud computing company likely outranks what could be expected of an in-house IT staff.
Trends in data security incidents

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Breaches</th>
<th>Breaches in Government Sector</th>
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<tr>
<td>2012</td>
<td>471</td>
<td>55</td>
</tr>
<tr>
<td>2013</td>
<td>614</td>
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<td>2014</td>
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<td>2015</td>
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<td>63</td>
</tr>
<tr>
<td>2016</td>
<td>1,091</td>
<td>72</td>
</tr>
<tr>
<td>2017</td>
<td>1,579</td>
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</tr>
</tbody>
</table>

What the numbers tell us

Data security is of highest importance for every industry, including public and private subsidized housing providers, and for good reason. According to the Identity Theft Resource Center (ITRC), data breaches hit an all-time high in 2017, rising 45% over 2016.¹

The leading causes of data breach incidents in 2017 were hacking, skimming and phishing attacks. Each are slightly different methods with a common purpose: to obtain login credentials and procure Personally Identifiable Information (PII). PII presents an alluring target to hackers. Social Security numbers and dates of birth can be used to create an entire profile of an individual and have value (both monetary and otherwise) for many illicit activities.

Subsidized housing organizations are not immune to the threat and could be an enticing target for hackers. Housing providers collect PII for thousands of people each day. Names, social security numbers and bank account numbers are just some of the sensitive data that could be potentially targeted.

¹ [https://www.idtheftcenter.org/2017-data-breaches/]
In the Data Breach Industry Forecast for 2018, Experian listed government agencies among the top organizations likely to be targeted in the United States. The report says a large-scale attack on critical infrastructure with the intention of causing chaos for governments, companies and private citizens is a likely scenario. It’s possible that public housing agencies, local housing departments and nonprofit housing developers could be affected because they work closely with many government bodies and serve millions of citizens with housing and supportive services.

Recent, high-profile events have involved ransomware, which enables an attacker to invade a network through spam email, a camouflaged link, or a “Trojan Horse” attachment, encrypting data and locking out users. Paying the ransom releases the data and the device. Payment demands range from small sums to thousands of dollars. While in the past ransomware primarily struck individuals, the latest victims involve data-rich institutions like hospitals and government agencies.³

Such an attack occurred to the City of Atlanta in early 2018. Five of the city’s 13 departments were affected, and more than 8,000 employees were instructed to keep their computers turned off for five working days. Losses in productivity, as well as costs to mitigate the ransomware attack, totaled more than $2.6 million.⁴ Thankfully for Atlanta, that figure did not reach the potential cost many experts believe possible through a sophisticated ransomware attack.

For perpetrators, ransomware is purely a moneymaking enterprise. For public entities, ransomware attacks could have catastrophic ramifications. With sensitive data on-hand and reliance on data to execute the most basic functions of a housing agency, ransomware attackers could make expensive demands and expect threatened organizations to pay up quickly.

⁴ https://www.wired.com/story/atlanta-spent-26m-recover-from-ransomware-scare/
The benefits of the cloud

Security, cost savings and convenience are the three main benefits offered by cloud-based solutions

Using multiple software systems from multiple vendors can heighten risk exposure, especially when sensitive data is shared across different platforms with disparate security levels. When hackers attempt to penetrate an organization, they look for weak applications and then move laterally to other databases within the hacked organization. Therefore, hackers can use a system improperly hardened (even if it does not contain sensitive data) as a conduit to gain access to a valuable target.

For end users, the difference between cloud-based and locally hosted software is negligible and likely unnoticeable. Users login with a unique name and password and use their software interface to work with their organizational data.
Outsourcing services for hosting software is a proven strategy to get more value from an IT budget. It is cost-prohibitive for most organizations to pay in-house employees to perform services comparable to a large cloud services provider.

The best cloud computing providers offer seamless security services and back up their clients’ data in multiple interregional locations. The security operations center of a cloud services provider includes a team of trained professionals which constantly monitors the environment to block attacks and investigate anomalies.

Gain efficiency

Working in the cloud offers a unique opportunity to work with live data from anywhere users have access to an internet connection. For example, running reports with live data presents stakeholders with a real-time, single version of the truth. Executives can review reports, approve expenses and authorize payments when and where it’s most convenient for them, instead of being tied to a desk.
The Yardi solution

Within the Yardi cloud, client data resides behind multiple layers of firewalls and intrusion prevention systems. Strong password policies and SSO integration ensure that users are authenticated in real time, and role-based application security verifies users can only access data they are authorized to see. In addition, multiple encryption layers of both data at rest and data in motion guarantee that if a breach occurs, the data remains protected.

Yardi constantly backs up and replicates all data to an off-site center to ensure business continuity. Yardi partners with world-class data centers providers, and exclusively hosts in Tier 3 co-location spaces to establish full redundancy of all components, including power, internet connectivity and more.

Yardi Security Layers

1. Data sent over the internet is always encrypted.

2. Defense-in-depth security with multiple layers of protection from the network exterior to the application and database servers.

3. Real-time anti-virus and anti-malware software safeguards all Yardi servers.

4. Active Directory Security ensures users only have access to their organization’s specific applications.

5. Multiple layers of database encryption ensure security of data at rest. The system authenticates any attempt to log in to the database server.

6. User-defined access allows system administrators to authorize users from within the program to access program features and reports and can define “idle” periods for session timeouts.

7. Strong password policies including password length, complexity rules, and change policy can be defined by system administrators.
Yardi was named to the Forbes Cloud 100 list of the world’s best private companies in cloud computing in 2016, 2017 and 2018.5 Awardees were selected by a panel of judges representing leading public cloud companies, using qualitative and quantitative data from each nominee, along with third-party data sources. The evaluation process involved four factors: estimated valuation (30%), operating metrics (20%), people and culture (15%) and market leadership (35%).

5 https://www.forbes.com/cloud100/#1c077da5f941
Conclusion

One of the biggest threats to data security is complacency. There is no time to celebrate once an attack is averted or a breach is sealed. Attackers have likely already moved on to more advanced techniques.
A great way to gain peace of mind without making a large investment in time and staff is by working with a cloud services provider with a track record of success. Staying on top of the latest developments in database security is one of the many vital services Yardi provides to its cloud customers.

With more than a decade of cloud computing experience, Yardi’s award-winning Cloud Services division manages over 5,000 clients in 12 data centers around the world. Our dedicated cloud support team focuses on delivering clients the most secure environment possible and are subject to regular rigorous security audits.

Contact Yardi PHA/Affordable Sales at 800.866.1144 to discuss the Yardi cloud solution.
Leading Business-Wide
Real Estate Management Software and Services

At Yardi our mission is to provide our clients with superior products and outstanding customer service, while we take care of our employees and the communities where we work and live. With that commitment, Yardi leads the industry in providing full business software solutions for real estate investment management, property management, financial accounting, asset management, and ancillary services.

Organizations like yours have been using our proven and mature software with confidence for decades.