

The i2ACT Architecture

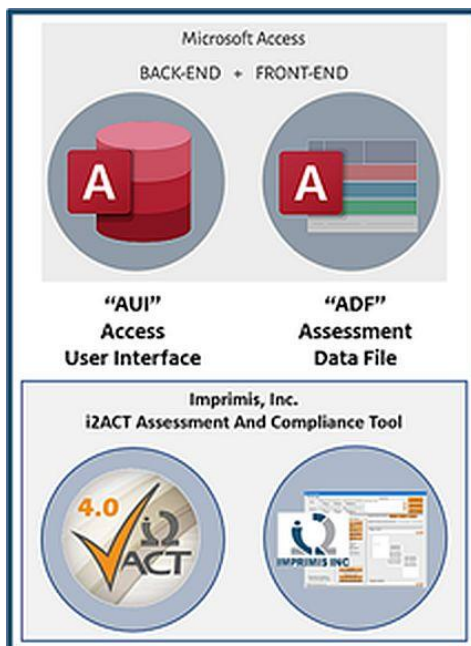
Developed Using Microsoft Access
Hosted On Premise
Multi-User Enabled, and Fully Secure

Overview

In 2010 when Imprimis decided to develop a NIST 800-53 and NIST 800-171 Assessment and Compliance Tool, the environment in which the tool would operate was based on the need for a high level of security due to the sensitive nature of information to be maintained and stored in the i2ACT database - on-premises versus cloud-based? After the analysis was done, Imprimis felt that because of the types of security risks that can occur in cloud computing environments we opted instead for a local on-premises solution. This does not mean we are restricted from provisioning the i2ACT Tool in a cloud-based virtual machine with enhanced security and access controls... We can, if a customer required this because we can build the security fencing and protections around the installation.

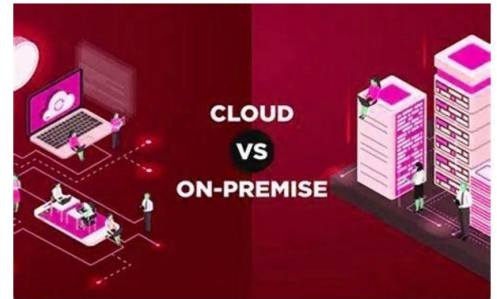
Even today, 15 years later, cloud computing service providers still are plagued by various technical vulnerabilities, human errors, and continuously changing attack vectors. Owing to the rapid increase in cloud adoption, Imprimis had considered making a switch to a cloud model, but due to the number of ongoing data breaches and insecure API's, account hijacking, insider threats, Denial of Service (DoS) Attacks, lack of end-to-end encryption, and the fact that many cloud services vendors are not willing to accept shared responsibility for security operations, we have continued to maintain that our original "on-premises" decision still holds true today to provide the most secure environment for the hosting of the i2ACT software solution.

Unique "Split Database Architecture" of Access



Microsoft Access applications utilizes a unique a split-database architecture. The single database can be divided into a separate "back-end" file that contains the data tables (shared on a local file server) and is known as the **ADF** or "**Assessment Data File**", and a "front-end" (containing the application's objects such as queries, forms, reports, macros, and modules) that is known as an **AUI (Application User Interface)** running on a users workstation.

The AUI is distributed to each user's desktop and linked to the shared database. Using this approach, each user has a copy of Microsoft Access (or the runtime) installed on their machine along with their application database. This reduces network traffic since the application is not retrieved for each use. The AUI database can still contain local tables for storing a user's settings or temporary data.



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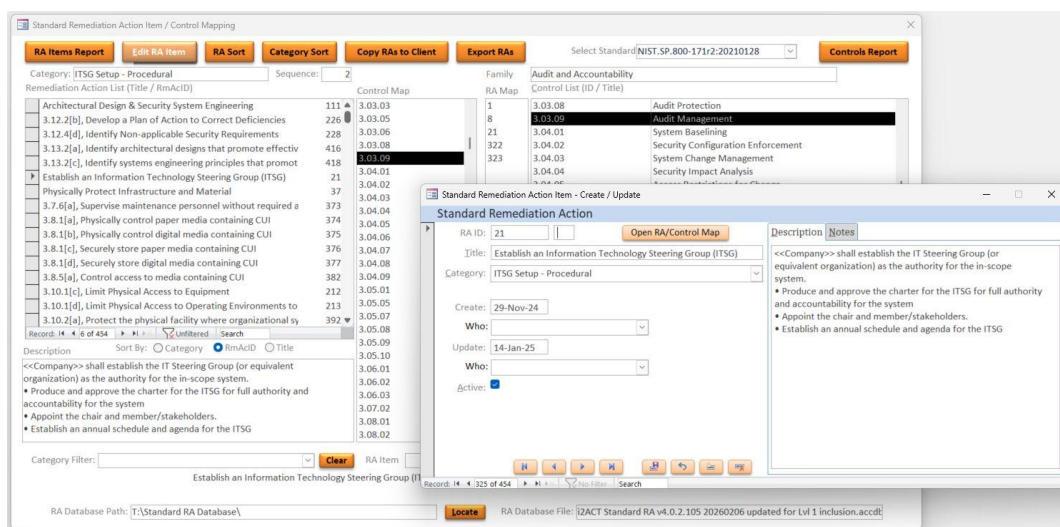
The ADF is created the first time the AUI is launched asking a user to create a new ADF or select from an existing ADF file. Data is entered into the ADF as the Assessment workflow progresses and can be accessed by multiple users on a shared network. The user may create multiple ADF file(s) as needed but can only access one assessment data file at a time.

This flexible dual frontend and backend-architecture design of the i2ACT platform provides the ability to update the software on a regular basis with new software builds that can be easily distributed to users independent of their ADF file(s). An Example of this extensible database capability is outlined below in, "The RAM Update".

Future-Ready Database Add-on Capability Example

"The RAM Update"

One of the reasons that Imprimis utilized the Microsoft Access platform is that we can "drop-in" or "add-on" new databases or reference information into the Tool and seamlessly integrate it to the User Interface through a special software license key management process.



Remediation Actions and Methods:

This is an add-on database of over 400+ remediation actions and best practice methods that you can choose from to add to a control in your i2ACT assessment that is not fully implemented. It can be assigned to a Remediation Action (RA) and be inserted into the i2ACT's Remediation tab. The Remediation tab allows documentation of the actions that are needed to correct the controls that are assessed as Planned / Not Met for use in generating a plan of action in resolving the deficiencies in the control.

The RAM Update is only \$395 and can be integrated with the i2ACT CMMC Level 1, 2, or 3 tool at the time of purchase, or it can be added on in the future as a separate database purchase that can be done after the original software has been acquired.