

We are often asked to review the pros and cons of municipalities performing internal hosting of ITpipes Web or using ITpipes Cloud. This document outlines the pros and cons of both options.

Internal Hosting

Pros:

- **Control:** With internal hosting, the city has complete control over the software and infrastructure, which can be important for certain types of applications that require strict compliance or regulatory requirements.
- **Integration:** Internal hosting can allow for easier integration with other internal systems or databases.
- **Security:** Internal staff has full control over security configurations, customization, data and storage.
- **Predictable Costs:** Internal hosting can provide static costs for hardware. **Security:** Some cities may feel more secure hosting their software internally, as they have complete control over the security measures implemented.

Cons:

- **Upfront Costs:** Internal hosting typically requires more upfront investment in hardware, software licenses, and IT staffing to maintain and manage the infrastructure.
- **Implementation:** Initial implementation and setup requires IT resources to setup and test the ITpipes Web, Sync, and Mobile.
- **Maintenance:** With internal hosting, the city is responsible for maintaining and updating the infrastructure and software, which can require ongoing IT staffing and resources.
- **Scalability:** Internal hosting may not be as scalable or flexible as cloud-hosted software, which can be a disadvantage for cities that must rapidly adapt to changing needs or demands.
- **Security:** Internal staff need to manage security concerns for any staff accessing the inspections outside the internal network, including municipal staff as well as outside engineers or contractors.
- **Access:** Providing and maintaining user access can be challenging with internal hosting, especially if users need to access the software remotely. This may require the use of a VPN or other setups, which can be complex and challenging to manage.

Overall, internal hosting can provide benefits related to control, customization, integration, and predictable costs, but it typically requires more upfront investment and ongoing IT staffing to maintain and manage the infrastructure. Additionally, internal hosting may not be as scalable or flexible as cloud-hosted software, and providing and maintaining user access can be a challenge, especially for remote users.

ITpipes Cloud Hosting

Pros:

- Scalability: Cloud hosting allows for greater scalability, as the software can easily adapt to fluctuations in usage or demand.
- Cost-effective: Cloud hosting typically requires less upfront capital than internally hosted software and can reduce the need for dedicated IT staff to manage the infrastructure.
- Accessibility: Cloud hosting can be accessed from anywhere with an internet connection, making it easier for staff to work remotely or access ITpipes from different locations.
- Implementation: Initial implementation and setup of ITpipes Web, Sync, and Mobile is done by ITpipes with minimal IT involvement.
- Upgrades and maintenance: Cloud hosting is typically easier to upgrade and maintain, as the service provider handles these tasks.
- Disaster recovery: Cloud hosting typically has disaster recovery plans in place to ensure that data is backed up and can be recovered in the event of an outage or disaster.
- Security: Cloud hosting puts the security responsibility on ITpipes and we have a team specifically dedicated to ensuring we have robust security measures in place to protect customer data.
- User Permissions: Cloud hosting can make it easier to manage user permissions across an internal network, as the vendor typically provides tools and support for this.

Cons:

- Dependence on Vendor: Cloud hosting means that the city is dependent on the vendor to maintain the software and infrastructure, which can be a disadvantage if the vendor experiences downtime or goes out of business.
- Data Security: With Cloud hosting, there is a risk that sensitive data could be compromised if the vendor experiences a security breach or data leak.
- Subscription Costs: Cloud hosting typically involves ongoing subscription fees, which can add up over time and may not be as predictable as the upfront costs associated with internal hosting.

Overall, cloud vendor hosting can provide benefits related to scalability, cost-effectiveness, accessibility, upgrades and maintenance, disaster recovery, and user permissions. However, there are also potential risks related to dependence on the vendor, data security, and subscription costs.

Setup Requirements

Web Setup, client internal hosted

- GIS Administrator to set up an initial map for ITpipes consumption and provide input on field mapping. Time for this varies based on existing map setup and needs.
- I.T. Administrator to confirm server meets requirements and is set up prior to the online session with ITpipes. One session of 1 hour. Could be longer if no server is available and needs to be ordered or set up.
- I.T. Administrator with full system permissions. Three to four remote sessions of 1-2 hours each, for a total of 6-8 hours.
- Stakeholders to attend Web and Web Administration training. Two remote sessions of 2-4 hours.
- Client to assign an internal "ITpipes Administrator" that will set up Client users. One remote session of 1-2 hours.
- Stakeholders are available to assign work and/or confirm completed inspections sync properly. Three to six remote sessions of 1 hour each, for a total of 3-6 hours.
- Sync testing requires IT Admin availability, including.
 - Confirmation of user permissions to relative server locations.
 - Availability with access to the CCTV Unit for initial set up of ITpipes Mobile and Sync for set up and testing. Three to six remote sessions of 1-2 hours each, for a total of 6-12 hours, per CCTV unit.
- Ongoing management does require:
 - Setup of user permissions and server access with new users or related user changes.
 - Setup and testing of sync with each new user
 - As internal servers are updated during routine IT maintenance, we recommend clients perform permissions testing and sync testing to ensure no update has affected the sync process.

Web Setup, ITpipes Cloud

- GIS Administrator to set up an initial map for ITpipes consumption and provide input on field mapping. Time for this varies based on existing map setup and needs.
- Stakeholders to attend Web training and basic Web Administration training. Two remote sessions of 2-4 hours.
- Client to assign an internal "ITpipes Administrator" that will setup Client users. One remote session of 1-2 hours.
- Stakeholders available to assign work and/or confirm completed inspections sync properly. Three to six remote sessions of 1 hour each, for a total of 3-6 hours.

Mobile Setup for each CCTV unit, Quantity of 7

- Access by ITpipes to CCTV unit for initial set up of ITpipes Mobile with Sync. Three to six remote sessions of 1-2 hours each, for a total of 6-12 hours, per CCTV unit.
- GIS Administrator to set up an initial map for ITpipes consumption and provide input on field mapping. Time for this varies based on existing map setup and needs.

- Inspectors available to perform inspections regularly to test ITpipes Mobile and Sync. Time varies depending on the inspections performed.
- I.T. Administrator with full, local system permissions as needed. Note with Pano soft controls hardware from Ibak, Ibak requires each user to have full administrative local permissions to use the hardware control system.
- Sync testing requires inspector and access to the CCTV Unit for initial set up of ITpipes Mobile and Sync for set up and testing. Three to six remote sessions of 1-2 hours each, for a total of 6-12 hours per CCTV unit.

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