



Architecture & Solutions Overview



Table of Contents

The Changing Facilities Management Landscape

03

<i>What Makes Fexa an Effective Facilities Management Solution?</i>	4
---	---

Fexa Features & Benefits

05

<i>Designed For Your Team</i>	5
<i>Made to Work For You, Not the Other Way Around</i>	6
<i>Built to Handle Complexity & Scale</i>	6

What Fexa Can Offer Your Business

07

<i>Fexa Workflow Designer and Smart Automation Tools</i>	8
<i>Fexa Work Order Management</i>	9
<i>Vendor/Contractor Management</i>	10
<i>Building Management</i>	10
<i>Asset Management</i>	11

Table of Contents

Under the Hood: Technical Architecture **12**

Fexa Infrastructure Diagram 13

Database Failover, Backup, and Restore 14

File System Backup and Restore 14

Conclusion **15**

THE CHANGING FACILITIES MANAGEMENT LANDSCAPE

In today's world, the role of facilities management is becoming increasingly crucial. Businesses need to be more flexible and adaptable than ever before, driven by fast-paced changes in the market and advancements in technology.

Investing in the acquisition, management, and maintenance of physical facilities is a significant part of an organization's strategic plan. While cost management is essential, companies also understand that facilities play a vital role in building customer loyalty and delivering on their brand promise. Whether it's a retail store, e-commerce warehouse, manufacturing center, distribution hub, or corporate office, the customer experience often hinges on the quality and functionality of these spaces.

Successful technology implementation relies on understanding the technology adoption maturity cycle. Digital transformation progresses at different rates across industries and even within specific industry segments. The various trades and providers supporting multi-location facilities are at different stages of this journey. Therefore, making digital transformation accessible and manageable for everyone involved is key to success.

By diving into the solutions offered by Fexa, you'll discover how to enhance your facilities management practices, stay competitive in an ever-changing market, and see how Fexa can potentially help to streamline your operations.

What Makes Fexa an Effective Facilities Management Solution?

The Fexa solution addresses the dynamic needs of the business of facilities management as described throughout this document. Fexa solutions are designed, developed, and supported by an experienced team that understands both the business and technological landscape for facilities work. Fexa encompasses both experiential depth in understanding where the industry has been, the diverse range of where it is today, and where it is going. The foundational technology design starts with a deep understanding of today's business's challenges and opportunities. Fexa applies modern technology and software design principles. Fexa is future capable and future-ready – delivering a highly configurable, intelligent, and flexible platform today that is extensible for the future.

The Fexa solution is designed to deliver the desired business outcomes for facilities management with a robust modern technology architecture. The Fexa solution is designed and delivered to:

- Be **flexible** enough to address the dynamic nature of changes in the industry.
- Be future-ready to absorb and ingest **new data sources** (IoT, unstructured data, sentiment analysis data, as examples) as data points or triggers in digital processes.
- Be highly reliable and available as the business becomes increasingly reliant on them.
- Be designed to play well with others, **easily integrating** into the customers' diverse and unique technology stacks.
- Support a range of **unique and varied workflows, vendor types & relationships, regulatory and financial compliance** requirements, and more.
- Enable intelligent, **sophisticated digital workflow** based on underlying business logic.
- **Automate** built-in workflow best practices specific to your unique business needs.
- **Integrate data and analytics** to identify, measure, and implement continuous improvement.
- Provide tools for **proactive planning**, including preventative maintenance (PM) programs and analytics tools that help businesses recognize trends over time. This capability enables more effective decision-making, resource allocation, and long-term strategic planning.
- Incorporate **project management capabilities** often needed for efficiently and effectively supporting ongoing changes in-store layouts, store rollouts or decommissions, and other types of multi-trade projects.

FEXA FEATURES & BENEFITS

Fexa is easy-to-use, flexible, and smart. The comprehensive attention to data capture and integrity ensures that all of your data is accessible for decision support and analysis. Getting facilities management and maintenance work accomplished in ways that benefit the business requires a community of individuals, process orchestration, effective communications, and rich contextual data for decision support. Fexa deploys a continuous development environment, releasing new features on a monthly basis across the entire customer community.

For a complete list of features, you may visit fexa.io/cmms-solutions

Designed for Your Team

The Fexa solution uses clean, modern material design principles, accelerating time to value by making it easy and intuitive to learn and use for all – no matter what your role is. The platform includes automated, user-friendly alerts and communications, which can be delivered through email, SMS, or IVR, to ensure smooth workflows and usability. The interface provides contextual guidance, such as configurable triage prompts and customer policy guidance, to enhance consistency and integrity. Additionally, support and trouble ticket submission are seamlessly integrated into the solution, ensuring that help is readily available whenever and wherever it's needed.

Made to Work for You, Not the Other Way Around

The Fexa solution encompasses all the best practices essential for facility management and maintenance work. It offers a versatile and adaptable framework that can be highly customized to meet the specific needs of your business. Workflows can be enhanced and automated to align with unique business logic and conditions. As your business evolves, so too will your facility needs, and Fexa makes it simple to integrate new processes, vendors, compliance requirements, and more.

The platform's flexibility allows for data-driven decision-making and analysis, with support for custom fields, business hierarchies, approval rules, and various asset and preventative maintenance programs.

Digital transformation is a continuous journey for any organization. Fexa provides a framework that seamlessly integrates with your existing systems and evolves alongside your business's digital transformation efforts. Its robust API integration options help break down silos across business functions, eliminating redundant or manual data entry. This approach not only enhances data integrity but also saves time and money for your business.

Built to Handle Complexity and Scale

Fexa's modern software architecture is designed to handle a wide range of requirements, from simple to highly complex. It supports intricate business logic and processes data from various sources, which can trigger automated communications and workflows. These data sources may include IoT asset data, warranty information, real estate data, accounting rules, and more.

WHAT FEXA CAN OFFER YOUR BUSINESS

Fexa makes it easy for multi-location enterprise facilities and operations teams to achieve quality results efficiently and cost-effectively. It provides the tools needed to continuously optimize operations, adapting to new business models and technological advancements. Whether facing new facility requirements or opportunities for technology integration, Fexa offers an intelligent and flexible solution. The Fexa team brings extensive experience in facilities management and modern software design.

The flexibility and configurability of the Fexa solution enables it to support a wide range of industries and locations worldwide. Companies across various sectors rely on Fexa as a critical part of their business operations.

Furthermore, Fexa's robust software architecture allows for unique workflows, custom fields, and attributes while maintaining a highly available and reliable codebase. This ensures that each customer can maximize their return on investment and operational benefits to meet their specific business needs.

Fexa also addresses essential requirements for managing facilities, including compliance management, which can be tailored to the relevant business logic in each environment. The solution's capabilities are further enhanced by integrated and flexible reporting and advanced analytics.

FEXA SOLUTION CAPABILITIES

REPORTING & ANALYTICS

WORK ORDER MANAGEMENT



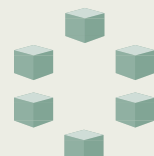
VENDOR/ CONTRACTOR MANAGEMENT



REFRIGERANT MANAGEMENT



ASSET MANAGEMENT



COMPLIANCE MANAGEMENT

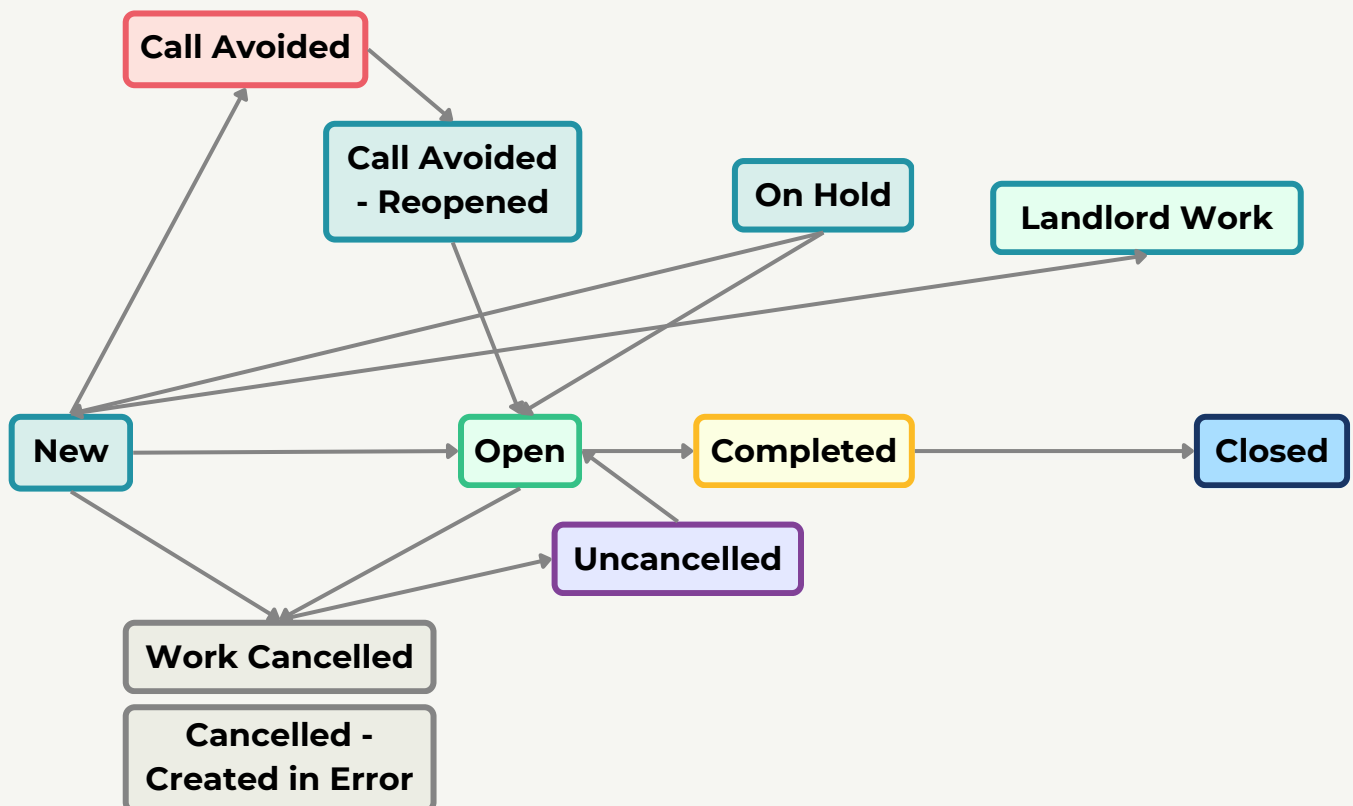
SOLUTION

Workflow Designer and Smart Automation Tools

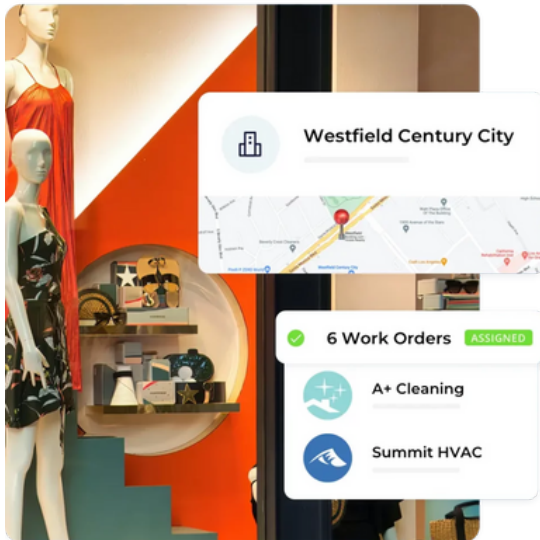
Fexa is able to configure highly customized workflows and integrate smart automation informed by each customers' individual business logic, unique data attributes, and needs through use of a sophisticated workflow designer tool within the Fexa environment.

Unique workflow and relevant automation and communication can be built for addressing each solution category and relevant needs. Automation and analytics can be further enhanced through custom fields – enabling a customer to utilize unique data points as triggers, as contextual decision support, or for rich historical analysis.

Here's a sample of a basic workflow design:



Work Order Management

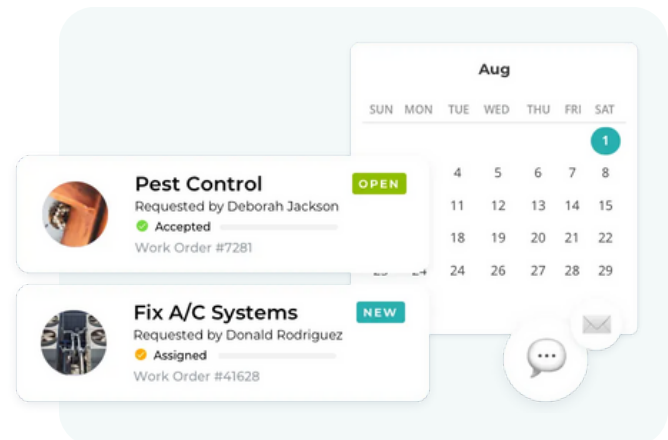


Fexa enables the management and optimization of the end-to-end work order life cycle for financial efficiency, performance, compliance, and continuous optimization. The power of Fexa's business logic informed automation is where the real benefits of the Fexa Work Order Management solution are exposed.

To accommodate diverse business needs, Fexa offers customizable solutions that can be adapted to meet your organization's current stage and complexity requirements.

Customers are able to employ the Fexa intelligent automation for a range of use cases. Just a few examples of use cases in which the power of business logic informed automation is harnessed by Fexa include:

- **Automated financial and vendor compliance checks** to assure only properly insured vendors performing within the context of their contract or NTE variables are selected and dispatched for the work.
- **Automated status alerts and geo-fencing IVR check in / check out** options so that vendor time reporting is accurate and interruptions for location personnel are minimized.
- **Automatically inserting a triage process** to eliminate duplicate or unnecessary expensive service visits.
- Capturing and **automating alerts** related to all steps of the work order management cycle inclusive of submission of proposal (if relevant), acceptance of work assignment, scheduling site visit, check-in/check-out, completion status or additional site visit required status, and more.

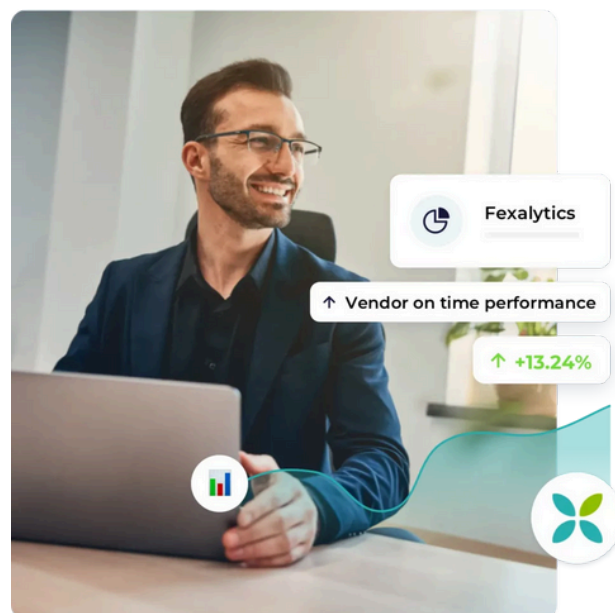


Throughout the entire processes, granular data is captured and available for further decision support in real-time (prioritizing follow up or approvals via sortable lists and grids) or as data that can be analyzed for identifying incremental process improvement opportunities, identifying and mitigating outlier issues, or informing budgeting for the future.

SOLUTION

Vendor / Contractor Management

The Fexa solution enables customers to manage work assignments with a vast range of capabilities specific to vendor and contractor management. Some customers even incorporate internal employee technicians as a part of their smart pool of resources. Vendor and contractor data inclusive of rate tables, Certificates of Insurance information, negotiated SLAs and geo coverage, and more are incorporated into the system and accessible as attributes which can be tapped for smart assignments, compliance validation, and more.



Vendor scorecards track system-wide KPIs for vendors overall. Customers can access important insights for managing and optimizing their vendor mix around a full range of best practice KPIs, but extensible to custom KPI calculations that might be important for the unique priorities of each customer.

With Fexa's advanced analytics capabilities, Fexalytics, analysis can extend to benchmarking and identifying outliers. Below is a sample of one of the many advanced analytics dashboards within Fexa. Outlier data can be accessed by drilling in and identifying any specific vendors who contribute with contextual data.

SOLUTION

Building Management

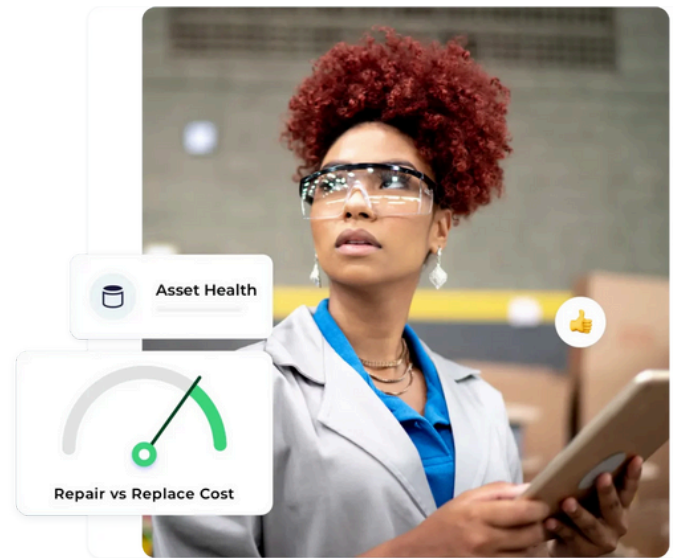
Increasingly, facilities management and maintenance decisions are made as a result of the unique arrangements on a facility-by-facility basis. Customers have locations with a variety of ownership and leasing arrangements in place. These arrangements influence how elements in the facility are managed.

Fexa can support business requirements by ingesting data from systems that track utilization, real estate context, leasing data or other systems as required. Customers can manage and optimize the physical resources by integrating and ingesting data related to sustainability regulations or objectives. As described previously, these data points can become an integral part of the decision support fabric of Fexa – triggering work, triggering and communicating for approvals, triggering what vendors are assigned based on supplier contracts, and more.

SOLUTION

Asset Management

Fexa offers a wide range of mechanisms for optimizing the life cycle and performance of assets critical to the business. Capture and utilize data-driven insights to optimize repair vs. replace decisions, optimize and reduce overall maintenance costs, enhance budgeting and planning, and enhance procurement negotiating positions and asset pipelines.



“Set and forget” preventive maintenance programs can be established uniquely to support multiple classes of high value assets. Additionally, the set and forget programs can be established with different rules for routine maintenance activities like cleaning services or fire and safety inspections. In all cases, as described in the work order management solution section, the workflow, approval process, and communications can be as varied and automated as appropriate for each situation.

UNDER THE HOOD: TECHNICAL ARCHITECTURE

Fexa is designed to support the demands of complex, large, global enterprise requirements. The Fexa software and deployment architecture create an environment that is highly available and can recover autonomously from a disaster event. Additionally, client data's importance - historical and current data - is critical to the business functions being managed and performed. Fexa takes extraordinary steps to mitigate the possible loss of data and maintain our customers' ability to recover from any issue that occurs.

Fexa uses Amazon Web Services (AWS) as its cloud infrastructure provider. With AWS, Fexa can take advantage of a scalable, reliable, and secure global computing infrastructure. Amazon's client list includes Adobe, Airbnb, BMW, Canon, GE, NASA, Netflix, Hitachi, and many other international companies that rely on AWS every minute of the day.

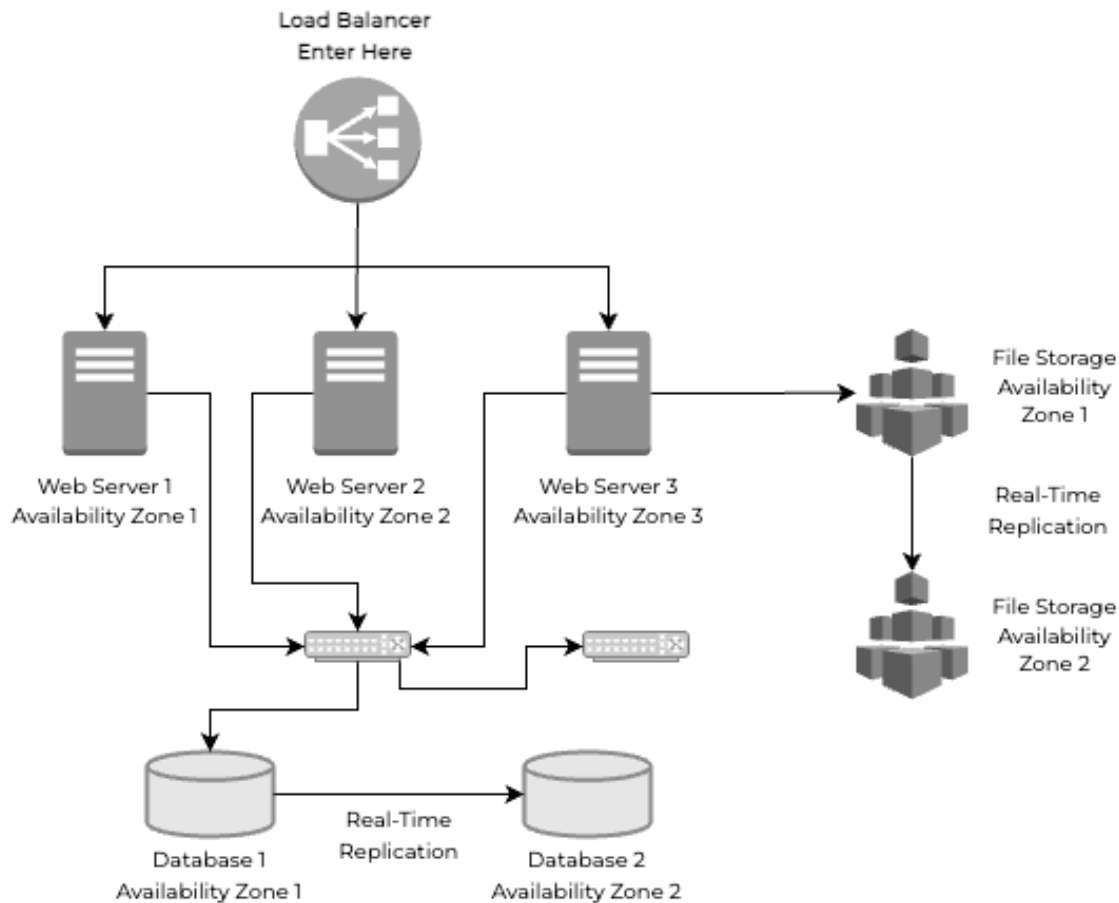
Fexa's infrastructure is deployed across multiple Availability Zones (AZ) in the AWS Cloud. Using tools like Multi-AZ Auto Scaling, MultiAZ DBs with Replication, Multi-AZ File Systems, and Elastic Load Balancing allows the Fexa application to scale up or down based on demand. It will replace servers automatically in the event of a failure of any server in the cluster.

The cloud infrastructure Fexa builds for its clients is configured to deploy web servers, file systems, and databases across Availability Zones automatically. In the unlikely event that there is an outage in one of the multiple Availability Zones, it will not cause service interruption in another AZ. Availability Zones are completely and physically separate from each other.

In addition to being a fully redundant solution, Fexa uses health checks to monitor the Fexa application's health constantly. If the application should become unresponsive or fail to load on one of the servers, the server hosting that instance of the application will be terminated, and a new one will take its place in minutes. The load balancer will move the session to another server transparently.

Fexa Infrastructure Diagram

Below is a diagram of a typical Fexa environment on AWS. The specifications and number of servers depend on the size of the client. Infrastructure is sized to ensure that there is adequate headroom for growth and that servers are never constrained or degrading performance.



Regardless of size, all clients are set up with a redundant configuration and will automatically recover from unforeseen failures and interruptions. Any single node that fails will be switched to a working node and will be replaced within minutes without human intervention. In fact, during slow periods, nodes are taken in and out of service without any interruption to the client.

Software deployments and changes are deployed to the client infrastructure in real-time without any downtime. Server upgrades and patches are also performed off hours but do not affect the uptime of Fexa.

Database Failover, Backup and Restore

Fexa uses Replication and Failover with all of our databases. Each of the databases lives in a separate Availability Zone. If something should happen to one of the cluster databases, Fexa would automatically and instantaneously route database requests to the fully replicated server in a different Availability Zone. The failed server would be replaced within minutes automatically, and its replacement would become the new standby database server; replication would continue as soon as the new database comes online. All of this happens without downtime to the user or Fexa application.

Due to Fexa's infrastructure design, it is improbable that backup procedures would need to be executed, but nothing is 100% in the world of computing (only approximately 99.99995%). So, Fexa has methods for restoring the databases. Our restore process uses AWS Database Backup to back up the database in full every night. In addition to the Full Nightly Backup, Snapshots are taken with each transaction committed to the database, including all transactions since the last full backup. These backups are run and stored on AWS infrastructure that is fully redundant across multiple AZs. At any given time, all of the data written to the database is backed up in the Full Backup and Snapshots. If a database needed to be restored, Fexa would create a new clustered database instance, apply the latest backup, and subsequently apply all of the existing snapshots from the backup system since the last Full Backup. Depending on the size of the database this would take anywhere for 30 minutes to 4 hours, with the net result being a fully restored database up to the moment of failure.

It is important to understand that having two DB servers in separate Availability Zones become unavailable at the same time is highly unlikely and would take a serious catastrophic event to accomplish.

File System Backup and Restore

Fexa uses AWS Filesystems to store files. These File Systems are stored and redundantly and synchronized across multiple AZs in real-time. In addition to being replicated, all Filesystems are backed up in total every week. Incremental backups are done Daily. The destination of the backups is on an additional Filesystem with the same redundancy as the first. In the unlikely event that all Availability Zones become unavailable, Fexa can restore files from the backup File System. The systems used to perform backups and restore processes are independent from the ones running Fexa software, so Fexa does not rely on what might be the failing infrastructure for Backup or Restoration of files. This approach ensures that client systems' performance is not affected during the backup cycle and they are not needed to restore successfully.

CONCLUSION

Fexa's suite of software and solutions is purpose-built for the complex and evolving challenges and opportunities faced by global enterprise facilities teams. The business solutions and underlying design and architecture of the Fexa solution are focused on the prevailing design principles we believe are critical for building a solution for today that will support the business's evolution.

Fexa solutions are designed to address both the challenges and opportunities that businesses today face through:

- **Flexibility and configurability** to support dynamic changes in the industry.
- A **future-ready architecture** that is poised to absorb and ingest new data sources (IoT, unstructured data, sentiment analysis data, and more) as data points or triggers in the digital process as businesses demand them.
- A highly **reliable and available infrastructure** approach.
- **Modern, clean API interfaces** that allow Fexa to play well with others.
- Support for **configurable workflows, custom fields, and automation** that taps into our customers' unique business logic and policies.
- **Rich integrated data and analytics** that provide decision support in context, in real-time, and as advanced analytics for analysis.
- Going **beyond "work order management" to project management** capabilities for complex requirements and multi-trade projects.

Get Started with Fexa — Fexa's advanced CMMS capabilities allow for businesses to overcome the challenges of traditional work order management and achieve greater efficiency and effectiveness in their operations. Learn how we keep work orders running smoothly by scheduling a live, personalized demo at: <https://info.fexa.io/lp/fexa-request-a-demo>.

About Fexa

Fexa delivers advanced facility management software tailored for multi-site businesses. Our highly configurable CMMS platform helps companies streamline operations, ensure compliance, and boost efficiency. Trusted by leading brands like Dollar General, Five Guys, and Crate & Barrel, Fexa supports nearly 2 million locations daily.

Learn more about Fexa at fexa.io.