Department of Purchasing and Contracting
NON-COMPETITIVE PROCUREMENT REQUEST FORM

Requesting Department: IT
Department Contact Person: Angela Green Telephone: 470_755-2241
Email: adgreen@dekalbcountyga.gov

Requisition Number: _____ Suggested Supplier: Journal Technologies
Estimated Amount of Purchase: $ 831,746.00
Detailed Description of the Goods or Services to be purchased: _Justware Upgrade to eSupervision

☐ **Emergency** (For Emergency Requests, Please check this box and answer all questions below.)

1. Date and Time of Emergency Occurrence _____

2. Please state the nature of the emergency posing a risk to public health, welfare, safety or resources:

3. State how the Estimated Amount was determined to be Fair and Reasonable (attach supporting documentation):

☑ **Sole Source** (Please check box and answer all of the following completely.)

1. Provide and explanation why the product, service or supplier requested is the only method that can satisfy the requirements. Please explain why alternatives are unacceptable. Be specific with regard to specification, features, characteristics, requirements, capabilities and compatibility. (Attach additional documents, if necessary):

   > Journal Technologies' eProbation Software will replace an application with little application support and a hardware platform no longer supported by Microsoft. With eProbation, State Court can manage clients, perform risk assessments, better reporting, and document management.

2. Will this purchase obligate us to a particular vendor for future purchases? (Either in terms of maintenance that only this vendor will be able to perform and/or if we purchase this item, will we need more "like" items in the future to match this one?) Explain in detail.

   > The vendor will host the application in their AWS environment, and the maintenance agreement will include maintenance for all equipment, license fees, upgrades, and technical support for the users.

3. Explain the impact to the County or Public if this request is not approved.

   > The current application runs on software and a platform that the vendor or Microsoft no longer supports. As a result, the users cannot request new reports or change the application for current regulatory requirements.

I hereby request that this non-competitive procurement request be approved for the purchase of the above stated work, material, equipment, commodity, or service.

Department Director (Typed/Printed Name) John Matelski Signature: John A. Matelski *Digitally signed by John A. Matelski Date 2023.07.10 08:45:14 -04'00'* Date: 07/10/23

Do Not Write Below – for the Department of Purchasing and Contracting Use Only

Procurement Agent (Typed/Printed Name) Tynia Inu-Umoru Signature: Tynia Inu Umoru Date: 07/19/23

Procurement Manager (Typed/Printed Name) Phyllis A. Head Signature: _____ Date: 07/19/23

☑ Approved ☐ Not Approved Michelle Butler
Signed by: Michelle N. Butler
Date & Time: 19 Sep. 2023 17:18:05 EDT

Zachary Williams
Signed by: Zachary L. Williams
Date & Time: 20 Sep, 2023 11:31:54 EDT

Procurement Manager: _____ Zachary L. Williams ,COO _____ Date: 07/19/23

Print Form

DeKalb County
GEORGIA

Public Notice of Proposed Award of Sole Source Procurement

Section A – Description of Proposed Sole Source Procurement

Description of Supplies/Services: Justware Upgrade to eSupervision

Demonstration of Contractor's Unique Qualifications:
DeKalb County utilizes Journal Technologies software as it is the only application whose architecture adds enduring value to the department by natively supporting long-term business changes such as:
- eSupervision gives the customer the tools to make changes to databases and screens.
- eSupervision allows the modification of existing workflows and the ability to create new workflow processes using its configurable workflow user interface.
- eSupervision lets the customer have control over system-wide searches and reports.

Section B – To Be Completed by the Department of Purchasing and Contracting

<u>Market Survey Results</u>

Date Public Notice posted on website: July 12, 2023

Date Public Notice closed: July 18, 2023

<u>Review of Offers</u>

Were any offers received (Yes/No): No

Number of offers received:0

Responders: 0

Recommend award to Journal Technologies. The existing application software is obsolete and is no longer supported by the vendor or Microsoft. As a result, the users cannot request new or change the application for current regulatory requirements. Journal Technologies' eProbation Software, will replace the existing application with a non-Microsoft dependent solution requiring a minimal amount of support. With eProbation, State Court can manage clients, perform risk assessment, and provide better reporting and document management.

Tyria Anu Amoru	7/19/2023
Agent Signature	Date
[signature]	7/19/2023
Procurement Manager Signature	Date

Journal
Technologies

February 23, 2023

Michelle N. Butler
Procurement Manager
Email address: mnbutler@dekalbcountyga.gov

Re: Sole Source Letter for eSupervision Procurement by State Court Probation Department

Dear Ms. Butler:

I am writing to support the DeKalb County State Court Probation Department's selection of Journal Technologies' eSupervision system. To move forward with an eSupervision project, the department indicates that it requires sole source justification.

Journal Technologies' eSupervision system is not the only software application on the market that has the ability to support probation departments. However, it is the only application whose architecture adds enduring value to the department by natively supporting long-term business changes. This means that the system is configurable and flexible in ways that other software applications are not. Three significant examples include:

1. eSupervision gives the customer the tools to make changes to the database and screens so they can:
   a. Modify the system's existing tables and fields;
   b. Add new tables and fields;
   c. Change and create new screens for the purpose of capturing and displaying data.
2. eSupervision allows the customer to modify existing workflows and to create new workflow processes using its configurable workflow user interface. This allows the customer to set up automated and human-monitored work queues. The customer can:
   a. Determine the workflow's triggers (database, date, timer, and file location);
   b. Direct work to the right team or person assigned for that task;
   c. Present the precise screen in which the task will be performed;
   d. Create several task results which then trigger the next process;
   e. Automate work that would otherwise be keyed by the end user; and
   f. Use the system's dynamically generated workflow graph to support training.
3. eSupervision lets the customer have control over system-wide searches and reports where they can:
   a. Access all case- and person-related elements in the database;
   b. Add/modify data fields on existing searches;
   c. Create new customized searches on the fly;
   d. Save the searches to the end user's dashboard;

I have attached a listing of all of eSupervision's configurable capabilities, all of which have been built to allow a customer to overcome the difficulties that they encounter when they select purpose-built software.

In addition to these benefits, Journal Technologies is the creator of the JustWare system that the department uses today. Both JustWare and eSupervision were developed by Journal Technologies. We are experts in the systems' data structures and have built the toolkit to migrate data from JustWare to eSupervision. This will save significant time compared to other vendors who must learn the data structures and perform expensive conversion cycles to move the data.

We look forward to continuing to serve the Probation Department and are happy to answer any questions.

Regards,

David Smith

Sales Director

(520) 878-3252

dsmith@journaltech.com

eSupervision Configurable Components

Configurable components include the following:

- Metadata - Entities (Tables), including adding new fields to existing entities and adding new entities to the Solution that are then joined (or not) to other entities as collections.

- Lookup Lists, including adding new lookup lists that will be needed for new entity fields, relationships between lookup lists to restrict values are needed, for instance, when only specific case types should be connected to specific event types, attributes will be connected to lookup list values for third-party integration translations, descriptions of which document to use for the values, start/end dates to retain retired values, default sort by and usages to indicate where in the Solution the values are used.

- Searches, including search criteria and results, access to metadata and formatting, including drilldowns, unions (pivot tables), and validations. Results are form items (see below).

- Case Initiation, header and insert/update forms, including access to metadata, widgets, and transient fields, panels, static text, cross-references, validations, form rules, help notes, Save As, API enabled, double column and form items (see below).

- Form items within forms, which provide a number of configurable features once a metadata value is selected to appear in a form. Features include read only, required, text area, UI options, sort by, show link, carry over, hidden, multi-select lookup, default filter, inner join, custom label, form override, panel autocomplete, minimum/maximum characters for strings, default values, submit value, truncate, style class, style, help note, simple conditions, date format, mask, custom format, custom list, conditional formatting and show if.

- Workflow, including type (manual, automated, router), triggers (database, date, timer, file), results, deadlines, access control, assignment method, participation and Participants, end user screens and auto complete. Conditions available throughout.

- Business Rules, including Java, Navigation, and Script, Transactional, Read Only/Batch, Full Screen editor with tools, input parameters, output parameters, usages and execute rule with rollback and debug modes.

- Conditions, which allow the Supplier to drill into the metadata and create statements of the type IF condition OR and/or AND, which are useful throughout the Solution.

- System-wide help notes, which can be placed on any configurable field or panel on any configurable form.

- Time Standards, which work very much like triggers except that they are based on the age of items rather than "listening" for a particular action, including placement entity, placement condition, start date, expiration calculation, start triggers, completion triggers, reset triggers, pause triggers, resume triggers, cancel triggers and messaging.

- Checklists, including insert, update, code, name, description, effective from/to, automation/manual and conditions.

- Official Assignment Engine, including case type, case tracks, Location, business rule access, members and attributes.

- Risk Assessments, including:
    - LS/CMI (Level of Service/Case Management Inventory)
    - LSI-R (Level of Service Inventory-Revised)
    - LSI-R:SV (Level of Service Inventory–Revised: Screening Version)
    - Arnold Foundation PSA (Public Safety Assessment)
    - SOCRATES (Personal Drinking Questionnaire)
    - UNCOPE Screening Instrument for Substance Abuse
    - Social Determinants of Health (New York Foundling)
    - ORAS (Ohio Risk Assessment System)
    - Self Sufficiency Matrix
    - SLPRI (Salt Lake Pretrial Risk Instrument)
- Judge View (also known as Bench View and Chambers View), including labels, alerts and folder views within the Judge View.
- Minutes, which provides for real time data capture in the courtroom, including textual commands for various code types (composite, init, insert forms, text, update forms, trees, rules, and dynamic codes), category and case type selections, connection to any configurable insert and update form, options for Scope (event types, case types, minutes modes, Jurisdiction types), start/end dates, output with formatting, menus, modal popup and mass insert.
- Accounting, including natural accounts, distributions, distribution groups, assessments (fees), assessment groups, chart of accounts, GL account segments, reference tables, statute table, bank accounts, bank reconciliation, payment methods, till setup and management and trust accounting.
- Document templates that utilise Microsoft Word to create templates, output to Word or PDF, mapping for PDFs, mapping for Word, including template fields with conditions with key values, output format, trim, script and conditional format. Attributes, including stamp type, receipt types, security, case categories, form type, form groups, case types, event types and default clerk review status. Also keywords, eFile metadata, template upload and history, template root conditions, order, auto select and document relation, filing fees, service fees, notes and start/end dates.
- Dashboard, including access to ten gadgets (My Assignments, My Searches, etc.), single or double columns, themes (Barbie World, Galactic Empire, Sand, etc.).
- Security, including groups with assigned authorities. Authorities provide the ability to enable/restrict URLs, entity/case types, tasks (including for calendar, case, counters, dashboard, directory, docket, document, financial, bail, cash receipts, pay plans, tills, forms, help, lookup lists, metadata, minutes, questionnaires, reports, rules, search, security, system, timesheet and workflow), forms (every configurable form), reports, rules and Access Control Lists.
- Translations, which allow the Supplier to easily identify and configure a field display pursuant to the Customer's location, such as EN_US to EN_AU. This allows the Supplier to easily change "Organization" to "Organisation," or "Zip Code" to "Postcode."

- Document management - storage preferences that can be controlled by condition to route documents by any condition to different storage locations.
- Navigation, which allows configuration of left navigation menus and the top navigation with links to any form and URL.
- Visual Calendar ("Resource Calendar"), which allows configurable insert forms and header forms (the latter for hover-overs).

Available Inherently "Out Of The Box" with No Configuration

- Directory (except the lookup list values, and ability to organise directory entries)
- Cash Receipts screen (except lookup list values)
- Financials screen
- Reports screen (the individual reports are configurable)
- Joinders screen (lookup list values are configurable)
- Audit screen
- Document viewer (except the options to show notes, bookmarks/links, redact, which can be turned on by system property).

Configured Dynamically During Run-Time (Without Restarts or Down-Time)

- Lookup Lists
- Searches
- Case Initiation, header, and insert/update forms
- Form items within forms
- Workflow Business Rules Conditions
- System-wide help notes
- Time Standards Checklists
- Official Assignment Engine Minutes
- Accounting Document templates Dashboard
- Security Translations
- Document management Navigation
- Visual Calendar.

949 E 2nd St, Los Angeles, CA 90012 **Journal**
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September 22, 2022   (Updated: 12/13/22; 01/16/23; 02/01/23; 4/4/23; 6/30/23)   Confidential

Kimberly Phelps   klphelps@dekalbcountyga.gov
Assistant Chief Deputy
DeKalb County State Court Probation

Dear Ms. Phelps:

Thank you for your interest in upgrading from JustWare to eSupervision.

I enclose our preliminary pricing, which is based on information provided by the probation team, including using the baseline configuration with limited configuration tasks, data conversion from JustWare, 25 document templates, 25 reports, and an interface with Five Points Solutions payment system. As an alternative to the Five Points system, we offer our ePay-it payment system which will save the integration cost. The cost of system implementation will not increase for any services or products listed or described in the statement of work (subject to the Cost Proposal Overview and the terms of our subsequent agreement). This proposal and pricing is also with the understanding that Dekalb County staff will be responsive and have representation in meetings, training, and other reasonable tasks associated with the preparation and implementation. This pricing offer will expire within 90 days from the latest date of this letter.

The annual license and maintenance fees and the professional service fees are due as follows:

Milestone	Amount Due
Project Plan & Initiation Complete	20%
Case Structure Complete	20%
Workflow Processes Complete	20%
Full System Testing Complete/Go-live Ready	40%

The annual license and maintenance fees include licenses, updates, upgrades and routine support. Because we lease eSupervision, it is under continuous warranty.

I will call you to discuss this information and answer any additional questions.

Sincerely,

Jason Cribbs, Senior Account Executive
(702) 370-9439, jcribbs@journaltech.com

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Attachments:
- Cost Proposal Overview
- Functionality at a Glance
- Technology Information and Architecture
- Standard Agreements

Cost Proposal Overview

	One-Time Cost	Annual License and Maintenance Fees
	In thousands	
Professional services, including expenses		
Implementation	$ 250	
Conversion	0	
Interfaces	40	
Licenses, maintenance, upgrades and support		$ 55
	$ 290	$ 55
Hosting fees		$ 43

Costs for Years 1 - 5						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Implementation	$ 250,000					$ 250,000
Conversion	-					
Interfaces	40,000					40,000
Licenses, maintenance, upgrades and support[1]	55,000	57,750	60,638	63,669	66,853	303,910
Hosting[1]	43,000	45,150	47,408	49,778	52,267	237,602
Hosting document storage (38GB x $0.093/GB x 12 months)[1,2]	42	44	47	49	51	234
	$ 388,042	$ 102,944	$ 108,092	$ 113,496	$ 119,171	$ 831,746

[1] Prices increase pursuant to the CPI. These numbers assume CPI increase of 5%, but the actual CPI may be lower or higher.

[2] Customer reports its current document storage is 38GB. These costs will increase as storage requirements increase.

Notes

Since governments normally have limited capital budgets, we lease our systems so that our clients are not confronted with large initial capital investments. We have found that this model allows the court to plan for growth in a cost-conscious way and provides reinforcement and incentives in a "succeed-or-lose" environment for us to provide high-quality products and continuing services to our clients. For a highly service-oriented software agreement, the agency pays an annual fee. These costs include licenses, maintenance, updates, upgrades and routine support. This approach also spreads costs over the life of the project. The continuing licenses are subject to the payment of the annual fees. *Because we lease eSupervision, it is under continuous warranty.*

There are no upfront, one-time license fees or implementation progress payments. The annual eSupervision license and maintenance fees and the remaining professional service fees to date are due just before the rollout. Because eSupervision is configurable, there should be no customization except for any interfaces. Our implementation services for the project will be capped at 1,250 hours and limited to 12 months. Increases from this assumption will require additional cost.

We will include eSupervision user licenses for 43 users and additional user licenses (10% of agency users) for unlimited use of eSupervision Public Portal by the public, including lawyers, and (20% of those users) for unlimited use by other governmental agencies, including those accessing eSupervision via interfaces, for a total of 56 user licenses. If the number of users increases (decreases), there will be additional annual eSupervision annual license, maintenance and support fees and hosting fees. These fees are subject to an annual CPI adjustment and pursuant to the following schedule.

Pricing Table for System User Licenses for Centralized System

User Groups*	Licenses	Annual License and Maintenance Fees		Estimated Annual Hosting Fees excluding Storage Fees	
		Per License	For Group	Per License	For Group
1-50	50	$ 1,000	$ 50,000	$ 800	$ 40,000
51-100	50	800	40,000	500	25,000

* Prorated after 50 user licenses. The annual license, maintenance and support fee and hosting fee is governed by an agreement which are subject to an annual CPI adjustment.

Training will be integrated into all facets of configuration and implementation. Training begins day one. The more you do, the more you learn…and that is the basic training! Then you will be able to configure the systems when your business processes change.

There must be significant involvement from your IT personnel during the conversions and the interfaces listed below. Since your IT department will become familiar with eSupervision's API, you will be able to create and maintain interfaces. Any additional interfaces will cost $20,000 per data exchange.

Conversions
  • JustWare - $0

Interfaces
  • Five Point Solutions - two-way - $40,000 (as an alternative, install ePay-it, at no additional cost, see info below)

We have provided the hardware and system software specifications. Government agencies can purchase/lease equipment, especially the recommended standard hardware, at significant discounts. Consequently, you should use your costs of any additional equipment and system software you need in the planning process.

We will work efficiently with your office to reach execution of a mutually acceptable contract and has budgeted legal resources for a 60-day negotiation period, which we believe provides ample time for aligning any inconsistencies between our standard agreements and terms your office may

request. Where your office requires an extension of this period through no fault of ours, we may apply additional fees corresponding to the time expended by our legal resources, the invoicing of which shall occur upon contract execution.

We have included our estimated annual hosting fee of $43,000 plus taxes for Amazon GovCloud to provide a ballpark estimate, but it does not totally consider the type of hosting, including disaster recovery requirements. This estimate includes 1TB of database storage with each additional database storage TB costing $4,000 annually. Below are the costs for document storage: (All rates are subject to change.)

Service	Price per month
Storage – Frequent Access Tier	$0.093 per GB
Storage – Infrequent Access Tier	$0.055 per GB
Storage – Archive Access Tier	$0.0278 per GB

Storage usage is calculated in binary gigabytes (GB), where 1GB is 1,073,741,824 bytes. This unit of measurement is also known as a gibibyte (GiB), defined by the International Electrotechnical Commission (IEC).

Based on the existing document storage size of 38GB, the monthly cost of storage will be $3.53 per month at the highest rate (38GB x $0.093 = $3.53).

Journal Technologies automatically bills customers on an annual basis for Document Storage, until a customer's total Document Storage usage reaches a threshold of 2 TB, at which time such customers will begin receiving monthly invoices for Document Storage (the storage threshold determining billing timing is subject to change).

Option #1: Invoice
Customers will be sent an invoice, either annually or monthly depending on the customer's overall total Document Storage usage, for average daily storage usage. Customers may use ACH to make their Invoice Payments.

Option #2: Automated
Customers who wish to automatically pay for their Document Storage can setup a plan with Journal Technologies. Please contact your Journal Technologies representative.

In addition to the annual Hosting and Storage Fees that will be charged during the License Term as set forth in this proposal, if the agency elects to have JTI host the data conversion testing environment during the project implementation phase prior to Go Live because the agency doesn't meet the system requirements, then the agency shall pay JTI a minimum monthly fee of $3,600 per month plus tax for such hosted services provided prior to Go Live.

There are no software escrow fees; see Software Escrow Agreement. We have prepared our proposal based on the assumption the County is exempt from all State, Local and Federal excise taxes. Any change or increase in these taxes will be the responsibility of the County.

The annual license and maintenance fees include licenses, updates, upgrades and routine support. Non-routine projects, including subsequent training and legislative changes, will be done pursuant to a Statement of Work using an agreed upon hourly rate plus expenses. The current blended hourly rate is $200. However, because eSupervision is configurable, the IT department and power users will be able to make most changes.

ePay-it

ePay-it is an internet browser-based payment website that enables payment of fees, fines, penalties, assessments and any other Agency-ordered debt. ePay-it may be accessed by the public via:
- a web browser on a personal device
- an Agency provided workstation or kiosk

JTI's terms and conditions for providing the ePay-it website and processing electronic payments made to the court, including but not limited to payments made using the ePay-it website, are as follows:

a. JTI adds a convenience fee and credit card fee to every full or partial payment greater than $0. These fees may be paid by the payer (the percentage is added to the amount paid) or by the court (the percentage is deducted from the amount remitted to the court) at the option of the court. In most cases, the convenience fee of $5.95 is applied to full payments and $2.95 for partial payments. A credit card fee of 2.75% is applied to all payments. JTI may change the fees with 180 days advanced notice to the court. JTI and court may terminate ePay-It at any time with 30 days prior written notice.

b. JTI remits funds to the customer's bank account. To allow for settlement, JTI uses ACH to electronically transfer funds 4 business days from the date of the transaction. Therefore, the customer receives funds on a daily basis -- but each day's transfer are for transactions that occurred 4 business days earlier. There is no charge for the ACH transfer service.

c. In the event of a disputed transaction, JTI will deduct the disputed amount and the dispute charges from the amount remitted to the court in a subsequent period.

d. JTI will make detailed payment transaction reports available to the court.

e. JTI will use reasonable commercial efforts to ensure that the ePay-it website is reliable and highly available. JTI specifically does not warrant that the ePay-it website will function uninterrupted or be error free.

f. JTI will customize the court's ePay-it website theme with the general "look and feel" of the court's main website. This includes agency logo, color scheme, phone numbers, etc. This also includes any links back to the court's main website.

g. JTI will use reasonable commercial efforts to maintain the ePay-it website at WCAG level AA compliance.

h. JTI will place a link to their privacy and terms of use (TOU) statements on the ePay-it website. The court may provide an additional statement, but may not modify the JTI statements.

i. The court will provide staff to answer questions about the payment amounts, reasons for the charges and other questions having to do with the business of the court.

j. JTI will provide staff to answer questions about the technical operation of the ePay-it website. JTI does not answer questions about the business of the court and will direct people to the court.

k. If the court's system is not hosted by JTI, the court will make available technical staff, at the court's sole expense, to assist JTI in creating the linkage between the ePay-it website and the court's system.

eSupervision

Designed for busy supervision and probation professionals

Configurability and Flexibility

- Navigation
- Screens
- Data elements
- Financial distributions
- Business rules

Workflow

- Configure workflows processes
- Configurable triggers
- Configurable time standards
- Ad-hoc workflow redirection

Searches and Ad-Hoc Reporting

- Designed with a library of predefined searches or compose custom searches
- Or create new searches with easy point-and-click tools
- Download search results as xlsx, pdf, rtf, xml or csv formats
- Save Search functionality
- Full reporting capabilities
- Reports are uploaded for ad-hoc or batch processing
- Advanced search and ad-hoc reporting features support grant tracking and risk assessment statistics.

Document Management

- Generate documents to a central repository
- Documents automatically associated and saved
- Simple drag-and-drop feature
- Design Microsoft Word templates
- Documents can "listen" to courtroom activity
- Bulk scanning (batch scan multiple documents)

Person- and Case-centric

- Supports both case-centric view and activity, and person-centric view and activity
- See alerts for participants across cases

External Facing Website

- Works in conjunction with eProbation Public – an external facing website
- Treatment and program providers can search cases in which they are involved
- Update and upload certificate of completion
- Law enforcement can retrieve warrant status

Integration with Other Systems

- Configurable metadata layer for easy integration
- Quickly test and deploy changes

Additional eProbation Functionality

- Dashboard (fully customizable)
- Notes (virtual Post-It notes)
- Security enabled
- Checklists
- Work Crew assignments made manually or automatically. Attendance is logged and reported on
- Manage diversion processes – configure interview questions and processes, conduct screenings, generate case plans based on outcome of interviews and assessments.
- Business rules make sure all processes, compliance, and release information tracked
- Electronic home monitoring

Sample Implementation Plan

eSupervision is a product that includes Folder Views, Add and Update forms, selected workflows, and searches. We will work with your project managers, business analysts, subject matter experts, and IT staff to configure eSeries. The availability of your personnel will be a critical factor in meeting our project goals.

Project Phases and Plan

We will work together under these general phases to implement the system.

A. Project Planning and Initiation

Dependent on Client availability, initial kick-off meetings to commence this Project Planning and Initiation phase are estimated to occur within 30-60 days after contract signing. During this phase, the project schedule will be solidified, JTI/Client personnel (including staff that will be a part of the Client Help Desk) will be assigned tasks. For on-prem installations, the Client IT department will setup necessary instances of the system for purposes of Configuration, Conversion, Testing and Production etc. Initiating and other documents and tools will be provided, and the foundation for communication and requirements gathering will be established.

B. Case Structure

The purpose of this phase is to ensure that the Client can capture all the case data required in the system.

- JTI will install the system and demonstrate the system to the Client.
- Client and JTI will identify the adequate number of sample cases to enter in the system to identify missing data elements.
- Client will enter the cases in the system, identify missing data elements, and report back in a requirements document.
- JTI will update the system to capture the missing elements per the requirements document.
- Client will verify and report any instances where the system does not meet the requirements specified in the requirements document within 15 workdays. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- JTI will fix any issues and the Client will test again.

C. Financial Structure (if applicable)

In this phase, the Client's fines and fees are set-up to distribute according to statute, and for the Client to test to verify that all fines and fees are distributing correctly.

- Statute Table
    - JTI will train Client personnel on statute management.
    - JTI will provide statute table spreadsheet to Client personnel.
    - Client will complete statute table spreadsheet.
    - JTI review statute table spreadsheet with Client, and Client will update as needed.
    - JTI will replace the baseline system statutes with the Client's statutes.

Sample Implementation Plan

   - Client will thereafter maintain its statute table.

- Financials
   - JTI will discuss fines and fees distribution configuration and the disposition widget with Client to obtain an understanding of the requirements.
   - Client will provide chart of accounts and written breakdown of assessments.
   - JTI will document the proposed configuration of financials and receive approval from the Client before configuration.
   - JTI will load statutes, chart of accounts, and distributions.
   - JTI will configure assessments and update statutes based on assessments.
   - Client will test all financial configuration and report back any issues where the configuration does not match the requirements within 15 workdays. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
   - JIT will fix any issues and the Client will test again.

D) Data Conversion
For each database there will be a maximum of three full conversion iterations plus the Go Live iteration.

- We will convert your data from JustWare using our conversion tools. Your staff will be responsible for testing the conversion.

E) Interfaces

- For each interface, Client will provide Interface Specification Document. The document will include all information necessary to develop the interface, including:
   - File layouts, sample files to be used in testing, existing specification documents, and will assist JTI with the data element mappings between the two systems.
   - Other requirements such as filtering, throttling, queuing, transaction record retention period, and resending/republishing of messages.
   - Frequency/trigger information, specification of data transport mechanism requirements, port and firewall rules, and secure networking requirements.
   - Monitoring and reporting requirements, identification of exception types and processing of transactions, and bandwidth requirements based on expected transaction volumes.
- JTI will develop the interface to the requirements in the Interface Specification Document.
- Client will test the interface and report issues where the interface does match the requirements specified in the Interface Specification Document within 15 workdays. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- JTI will fix any issues and the client will test again.
- There will be a maximum of 3 iterations of testing
- The client will be responsible for ensuring the cooperation of its other contractors that are counterparties to the interfaces.

Sample Implementation Plan

F) Document Templates

- Client will provide list of document templates, including samples and specifications.
- Client and JTI will configure the document templates.
- Client will test configuration meets the requirements and report issues where the configuration does not meet the requirements within 15 workdays. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- Client and JTI will fix any issues and the Client will test again.
- There will be a maximum of 3 iterations for testing.

G) Workflow Processes

- Client will document configuration requirements with JTI's assistance.

- JTI and Client will identify changes and will finalize the new workflows.
- JTI will configure the new workflows in the system.
- Client will test if the configuration meets the requirements and report issues where the configuration does not meet the requirements within 15 workdays. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- JTI will fix any issues and the Client will test again.
- There will be a maximum of 3 iterations for testing.

H) Searches and Reports

- Client will provide a list of searches and reports, including samples, specifications and distributions.
- JTI and Client will determine the searches and reports needed in the future system.
- Client will document the search/report requirements with JTI's assistance.
- Client and JTI will configure the searches and reports.
- Client will test configured search/reports within 15 workdays and report any issues. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- JTI will fix the issues and the Client will test again.
- There will be a maximum of 3 iterations for testing.

I) Portal

- JTI will demonstrate the functionality to the Client's IT staff for evaluation.
- Client will provide JTI a set of written use cases that they want the Portal to support.
- JTI and Client will determine the use cases to be implemented in the portal.
- JTI will implement the necessary Portal configuration to support the use cases.

Sample Implementation Plan

- Once JTI completes the initial configuration, Client will begin acceptance testing against the functionality defined in the use cases.
- Client will report issues where the configuration does not match the specification within 15 workdays to JTI and the appropriate configuration changes will be made. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- JTI will fix any issues and the client will test again.
- There will be a maximum of 3 iterations for testing.

J) Full system testing

- Client and JTI will develop a testing plan.
- Client will conduct full system testing per the testing plan report issues where the configuration does not match the specification within 15 workdays to JTI and appropriate configuration changes will be made. If no issues are reported within 15 days, then the system configuration will be deemed to be accepted.
- JTI will fix any issues and the client will test again.
- There will be a maximum of 3 iterations for testing.

K) Cutover Plan, Implementation Training and Deployment

- Client and JTI will determine the deployment plan and schedule.
- Client, with JTI's assistance, will develop a training plan.
- Client will deliver end user training.
- JTI will create a deployment plan with Client's assistance.
- Prior to the go-live Client will sign a formal acceptance that the system configurations fulfill its requirements and will pay fees outlined in the Professional Services Agreement and License, Maintenance and Support Agreement.
- Final conversion and deployment will bring the system live in the production environment.

Sample Implementation Plan

Preliminary Implementation Timeline (12 Months)

Task	1	2	3	4	5	6	7	8	9	10	11	12
Project Plans and Status Reports												
Demonstrate and Configure -												
Case Structure												
Financial Structure and Statute Table												
Workflows and Processes												
Portal												
Document Management												
Searches and Reports												
User Security												
Interfaces												
Data Conversion												
Testing												
Training												
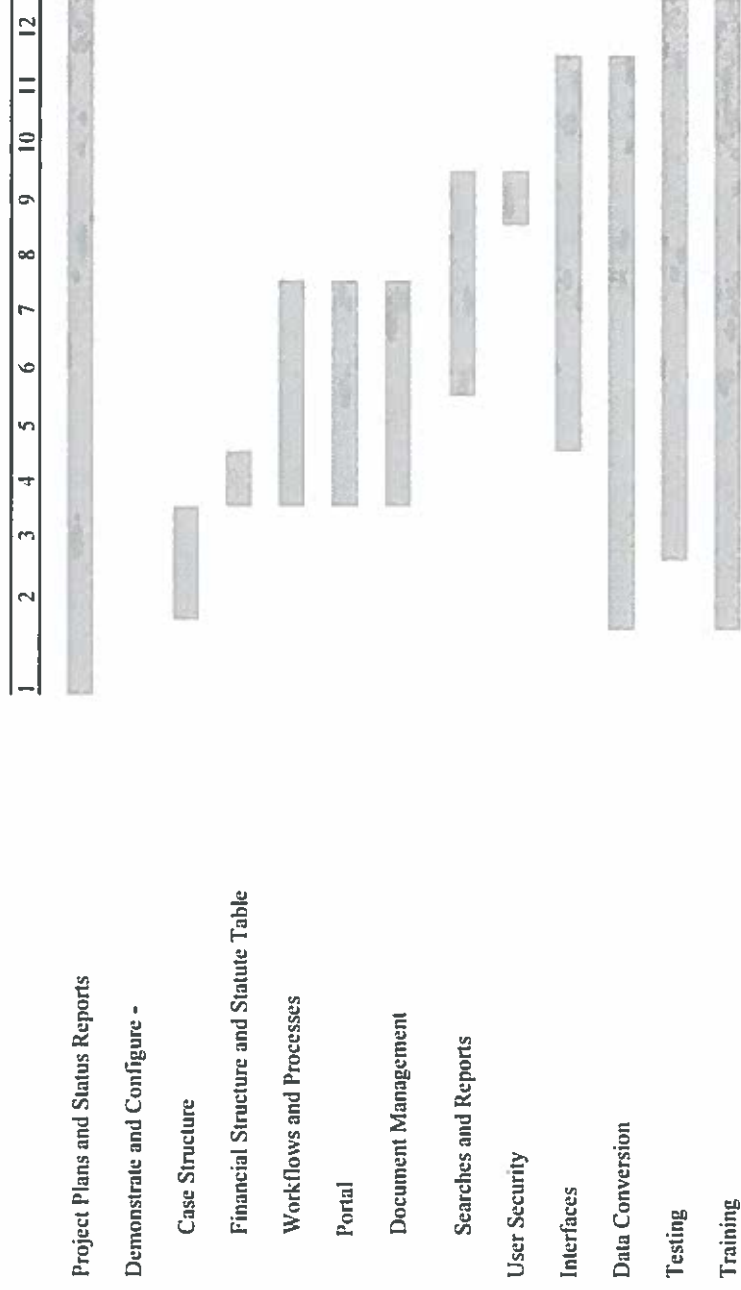
Technology Information and Architecture

eSupervision can be installed in the Cloud or on-premise.

On-Premise

We have included an on-premise system configuration of hardware and system software that is scalable. The system includes fail-over application and database servers that allow uninterrupted access to eSupervision if the primary servers are down. All can be virtualized using VMWare or equivalent.

Your IT department will want to determine the physical environment and network requirements for the widely used hardware and install the centralized hardware and system software. We can assist. The basic network requires a minimum 100MB to end-users and a 1G core switching.

Users only need a web browser (Internet Explorer 10+, Chrome, Firefox, etc.) to access eSupervision and the Public Portals from desktops, laptops, smartphones (iPhone, Android) and tablet devices (iPad, Galaxy, etc.) The system's graphical user interface, including all screens and dashboards, is natively touch screen enabled. Baseline and standard configured screens will be available in < 1 second. Highly complex, configured screens with a lot of data can take 2-3 seconds.

Software recommendations include: Windows 2016 or higher R2 Server Standard Edition, Microsoft SQL 2016 Enterprise Edition, Apache Tomcat and Jasper iReport.

eSupervision supports twain compliant scanners such as Kodak i2800, as well as the Fujitsu fi-5530C, fi-5750C, and fi-6770 models.

We do not provide hardware and system software and its maintenance and support; it is the IT departments' responsibility to provide, install, maintain and support the hardware and system software. We can assist with the installation.

The application includes built-in clustering capabilities and thus can be run on a cluster of machines. This type of setup handles single component hardware failures with automatic fail over. The recommended architecture described in the Architecture section is designed for such a clustered setup.

An identical configuration could be replicated at the secondary data center to handle widespread disaster at the primary production site. The administration documentation describes the necessary specifics for data replication. We do not mandate any specific technology for data replication to the secondary site.

The customer's IT team is free to use any replication technology, including the replication capabilities of the database server software. The database server software also provides procedures for switching over to the secondary site database.

Technology Information and Architecture

Assuming the database server is switched over, the switchover procedure consists of re-configuring the DNS server to make the site host name point to the IP address of the secondary data center. Such a switch is typically done manually by the customer IT team, but could also be automated based on specific criteria in customer policy. A typical switchover to the secondary site for eSupervision should take less than 10 minutes.

We also recommend at minimum daily incremental backups of the production database. The backup capabilities of the database server software or any 3rd party backup software can be used for this purpose. An off-site backup is also necessary to insure against large scale disaster at the primary backup location.
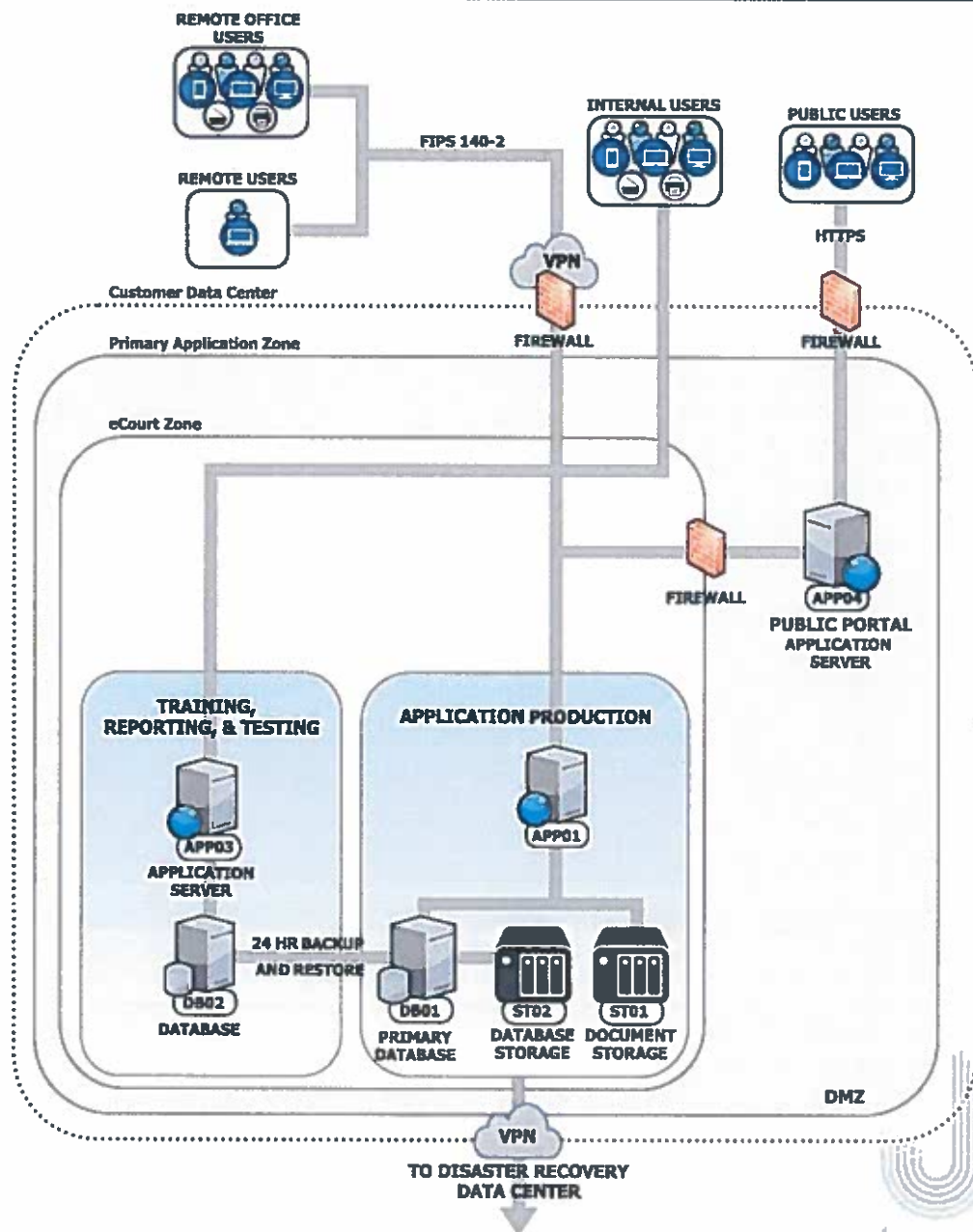
Recommended backup and recovery procedures are to be determined by your network and infrastructure teams. We will assist.

Technology Information and Architecture

On-Premise Recommended Hardware and Software

Customer Hosted - Primary   **(50 user)**

REMOTE OFFICE USERS

INTERNAL USERS

PUBLIC USERS

FIPS 140-2

REMOTE USERS

HTTPS

Customer Data Center

VPN

Primary Application Zone

FIREWALL

FIREWALL

eCourt Zone

FIREWALL

APP04
PUBLIC PORTAL
APPLICATION
SERVER

TRAINING, REPORTING, & TESTING

APPLICATION PRODUCTION

APP03
APPLICATION SERVER

APP01

24 HR BACKUP AND RESTORE

DB02
DATABASE

DB01
PRIMARY DATABASE

ST02
DATABASE STORAGE

ST01
DOCUMENT STORAGE

DMZ

VPN

TO DISASTER RECOVERY DATA CENTER

Journal

Technology Information and Architecture

Customer On-Premise - Disaster Recovery   (Off-site)

REMOTE OFFICE USERS

REMOTE USERS

PUBLIC USERS

FIPS 140-2

HTTPS

VPN

Customer Disaster Recovery Data Center

Disaster Recovery Application Zone

FIREWALL

FIREWALL

eCourt Zone

FIREWALL

APP06

PUBLIC PORTAL APPLICATION SERVER

APPLICATION

APP05

APPLICATION SERVER

DB03

PRIMARY DATABASE

ST04

DATABASE STORAGE

ST03

DOCUMENT STORAGE

DMZ

VPN

FROM PRIMARY DATA CENTER
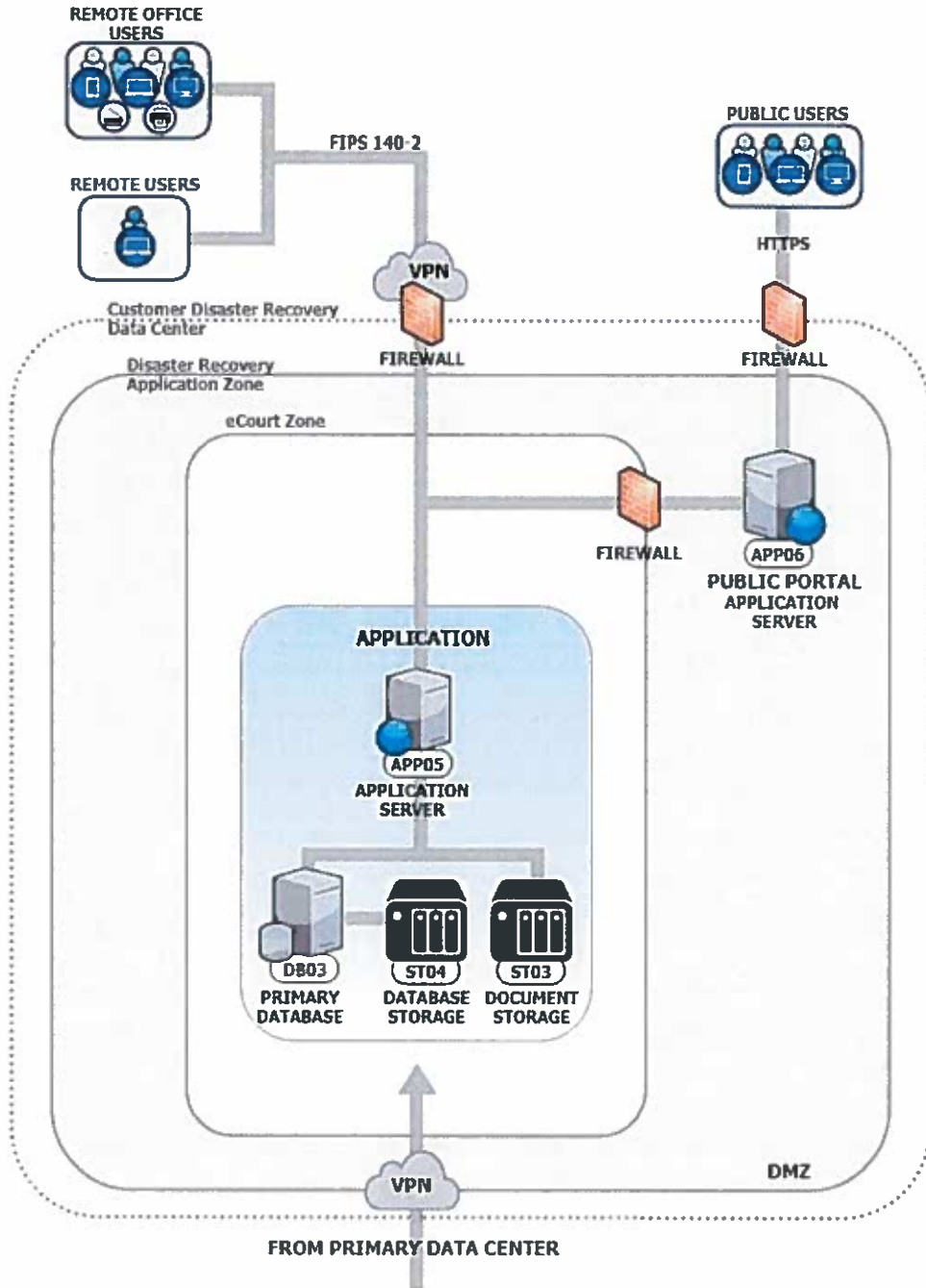
Technology Information and Architecture

Data Centers
Hardware/Software Manifest

- *APP01 - app server (4 CPU / 16 GB RAM / 100 GB HDD / 1Gb NET)
  - Ubuntu Linux or Windows
  - Tomcat 8
  - Java 8
  - Hazelcast
- *APP02 - app server (4 CPU / 16 GB RAM / 100 GB HDD / 1Gb NET)
  - Ubuntu Linux or Windows
  - Tomcat 8
  - Java 8
  - Hazelcast
- APP03 - report/testing/training server (4 CPU / 16 GB RAM / 500 GB HDD / 1Gb NET)
  - Ubuntu Linux or Windows
  - Tomcat 8
  - Java 8
  - Jasper
- APP04 - portal server (2 CPU / 8 GB RAM / 100 GB HDD / 1Gb NET)
  - Ubuntu Linux or Windows
  - Apache or Nginx
- APP05 - app server (4 CPU / 16 GB RAM / 100 GB HDD / 1Gb NET)
  - Ubuntu Linux or Windows
  - Tomcat 8
  - Java 8
- APP06 - portal server (2 CPU / 8 GB RAM / 100 GB HDD / 1Gb NET)
  - Ubuntu Linux or Windows
  - Apache or Nginx
- DB01 - db server (8 CPU / 64 GB RAM / 100 GB HDD / 1Gb NET)
  - MS Windows Server 2016
  - MS SQL Server 2016 Enterprise edition
- DB02 - db server (8 CPU / 64 GB RAM / 100 GB HDD / 1Gb NET)
  - MS Windows Server 2016
  - MS SQL Server 2016 Enterprise edition
- ST01 - Document/app server storage device with
  - 1 TB for Documents
  - 500 GB for app server data
  - 100 GB for config mgmt data
  - 500 GB for report server data
- ST02 - Database storage device with
  - 1 TB for DB
- ST03 - Document/app server storage device with
  - 1 TB for Documents

Technology Information and Architecture

- - 500 GB for app server data
  - 100 GB for config mgmt data
  - 500 GB for report server data
- ST04 - Database storage device with
  - 1 TB for DB
- Load balancer
- Firewalls and VPN devices as required

*Additional application and database servers may be added to scale up the solution.

Technology Information and Architecture

SaaS – Cloud Service

One of the benefits of our cloud service is rapid scalability due to virtualization. CPU cores and memory may be adjusted to meet demand. In a traditional data center, changes like this require hardware purchases, software licensing, addition on-site configuration and skilled personnel that may not always be readily available.

Our service options are served from top tier cloud partners such as Microsoft Azure Government and Amazon Web Services ("AWS") GovCloud. AWS GovCloud and Azure Government both utilize equipment designed to host sensitive data and regulated workloads in the cloud, helping customers support their U.S. government compliance requirements, including the International Traffic in Arms Regulations (ITAR) and Federal Risk and Authorization Management Program (FedRAMP). Sites are operated within the continental United States by employees who are vetted U.S. Citizens, and root account holders of accounts must confirm they are U.S. Persons before being granted access credentials.

All the hosted data remains your property during and after the lifetime of the hosting contract. At contract end a full copy of your database and electronic documents will be provided.

Snapshot backups are conducted at regular intervals as specified by your Support Level Agreement (SLA) with us. Backups snapshots are "encrypted at rest" with FIPS 140-2 compliant encryption techniques. Hot or warm redundant servers are available and multiple, generational backup copies are maintained. Backup images are stored in primary and disaster recovery sites.

Disaster recovery to a warm site is included by default in our service offering. After any disaster your production environment is reconstituted from backup images in an alternate datacenter. Since the cloud service is based on virtualization components this can be accomplished relatively quickly. For our warm solution we achieve a Recovery Point Objective (RPO) of six hours or less, and Recovery Time Objective (RTO) of twenty four hours or less.

Hot disaster recovery is also available as an option should immediate fail-over be a requirement. For hot fail-over we use state-of-the-art replication technology, your data is replicated to a redundant site. Replication happens on a trickle system keeping the recovery site aligned with the primary. For our hot failover solution we achieve Recovery Point Objective (RPO) in seconds, and Recovery Time Objective (RTO) in minutes

We conduct weekly vulnerability tests on every hosted customer environment. Patches are updates are applied during weekly pre-arranged maintenance windows.

The connection to your location is established using a site to site virtual private network (VPN). Our VPN endpoints are equipped with FIPS 140-2 cryptographic modules. Your

Technology Information and Architecture

data is always encrypted while in route to or from the AWS GovCloud servers.

Technology Information and Architecture

System Configuration Features

The following features and benefits are achieved by following the JTI application system guidelines. Other configurations are possible, but we believe that this configuration provides the optimum balance of performance, redundancy and security.

Application
- A dedicated application server is available. Some configurations include two or more, load balanced, application servers.
- A dedicated database server is available. Using Microsoft SQL Enterprise version creates a high availability cluster environment with the fallback database server.
- Application and document storage is provided on a dedicated network storage device. The storage device provides replication services to the fallback storage device. JTI will work with you to estimate initial storage requirements. A typical starting point is 1TB of database storage and 1TB of document storage.
- Database storage is provided on a dedicated network storage device. This provides high performance and isolation from the document and application storage device. Database replication is provided by MS SQL Server software.

Security
- All user connections are via FIPS 140-2 VPN, internal LAN or secure WAN.
- All public connections are via HTTPS to a service portal in a DMZ.
- The internet facing customer portal is in a DMZ. Access is via a firewall protected connection.
- Remote JTI Support is available via secure VPN connection.
- In some environment a dedicated server may be included to ensure HIPAA compliance.

Disaster Recovery (Optional)
There are many strategies to implement disaster recovery and the selection depends on budget, availability of a backup data center, tolerance of down time, etc. This information is presented as one possible strategy and JTI will consult on other possible strategies during implementation of your system.

- Database data is replicated to the disaster recovery zone in real time.
- Document data is replicated to the disaster recovery zone in real time.
- Data is encrypted at rest.
- A disaster recovery application server is available.
- A disaster recovery database server is available. Using Microsoft SQL Enterprise version ensures that data on the disaster recovery server is only moments behind the production server.
- Failover to the disaster recovery environment is not automatic. Some intervention will be required to establish VPN connectivity to the disaster recovery zone. This may be set up in advance to minimize downtime.

Technology Information and Architecture

User/Interface/Port Connections
- Internal users connect directly to the system, bypassing VPNs and firewalls
  - Network scanning and printing is available
- Remote users, clustered in an office, connect via VPN to achieve FIPS 140-2 compliance
  - Network scanning and printing is available
- Individual remote users connect via software VPN to achieve FIPS 140-2 compliance
  - Network scanning and printing is not available, but scanning too and printing from the local workstation is supported
- Communication protocols use standard ports and external interfaces generally do as well.

Training, Testing and Reporting
- A dedicated application server is available for training, testing and reporting
- A dedicated database server is available for training, testing and reporting
- The production database is replicated to the reporting database on a 24 hour basis

Public Portal
- A dedicated application server in a DMZ is available for the public portal.
- Connections to the portal server are encrypted via TLS.

Workstation Hardware Configuration

Component	Minimum Specification
Processor	1 @ 2.0 Ghz or faster
Hardware	Any
Memory	4 GB minimum
Monitor Size	Minimum resolution: 1600x1200
Video Card	Standard
Disc space	100 GB minimum
Network interface	Ethernet NIC
Operating system/version	Windows 7 or 8/8/1
Other required software and versions	Browser of your choice. Supported browsers IE 10+, Firefox, Chrome. Java Runtime Environment 7 for printing.
Third-party applications and versions, what they are used for	MS Word, Adobe (This is for viewing and generating documents in Word and PDF format).

Interactive Voice Response (IVR)

JTI products have the ability to seamlessly interface with third party IVR products. JTI works with our IVR partner, Heartland, to provide PCI compliant solutions that reduce the complexity and liability of handling credit card transactions on the phone.

Simple user access control can include a combination of case number, birthdate, driver's license number, pin, etc.

Typical uses of IVR include:

* Accessing appointment schedules
* Paying fees and fines
* Providing specific case information

Bar Code Technology

JTI products have the ability to automate and streamline document tagging and identification by using bar code identifiers. JTI programs work with most bar code readers and scanners to provide bar coded, work flow solutions.

Typical bar code uses include:

* Matching payment documents to cases
* Quickly pulling up case documents
* Automated scanning by interleaving documents

Technology Information and Architecture

Architecture

eSupervision is an n-tier, web-based application developed on Java Enterprise Edition (JEE) platform, an industry standard. A principle reason of choosing JEE is that it provides a superior match of cross-platform flexibility and performance relative to competing application environments. As a result, you can leverage your existing software investments.

The core design pattern of eSupervision is the Model-View-Controller (MVC) pattern, a proven, established methodology of architecting enterprise web applications. MVC separates design concerns (data persistence and behavior, presentation, and control), decreasing code duplication, centralizing control, and making the application more easily modifiable.
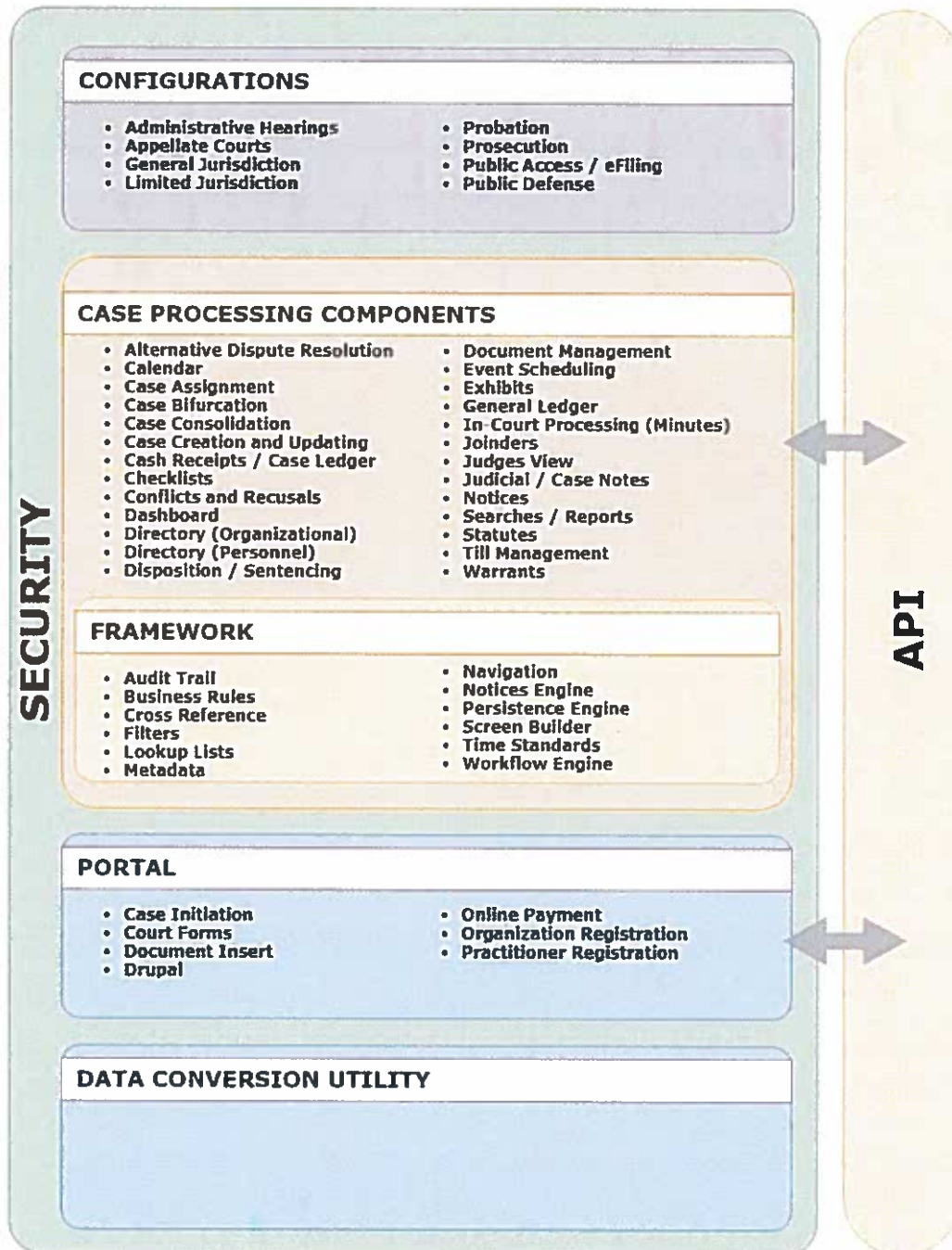
The software architecture consists of the following components:

- *Application Layer* - See below for detailed description of the main Application architecture.
- *Client Layer* - This consists of the various web-enabled devices (desktop PC's, notebooks, iPhones, PDAs, etc.), the browsers installed on them as well as any 3rd party applications installed on them. Since eSupervision uses standard Javascript/AJAX throughout the application, the clients may use Internet Explorer, Firefox or Chrome on all workstations throughout the organization (including branch offices, etc.). We use current html versions and avoid the use of technologies like Flash which may introduce security vulnerabilities. In addition, On the other hand 3rd party applications can communicate with eSupervision through the built-in Web Services APIs (see below).
- *Data Layer* - This includes the relational database (RDBMS) and the storage media supporting it. The system uses no triggers, cursors, stored procedures or any other database objects whose functionality may change across database platforms. It employs a relational database model with referential integrity strictly enforced. It indexes the baseline fields needed for general use. However, due to the system's configurable nature, system administrators are free to create indexes on additional fields as they see fit.
- **Application Layer Architecture**
  The Application Layer is composed of many modules, such as the data access layer, customizable metadata, security, configurable screens and searches, workflow, business rules, conditions, cash receipts, assessment engine, calendaring, minutes, directory, reports, document management, dashboard, etc. Below is a brief description of some of the most important modules that make-up eSupervision's architectural back-bone.

Technology Information and Architecture

eCourt Architecture

CONFIGURATIONS

- Administrative Hearings
- Appellate Courts
- General Jurisdiction
- Limited Jurisdiction
- Probation
- Prosecution
- Public Access / eFiling
- Public Defense

CASE PROCESSING COMPONENTS

- Alternative Dispute Resolution
- Calendar
- Case Assignment
- Case Bifurcation
- Case Consolidation
- Case Creation and Updating
- Cash Receipts / Case Ledger
- Checklists
- Conflicts and Recusals
- Dashboard
- Directory (Organizational)
- Directory (Personnel)
- Disposition / Sentencing
- Document Management
- Event Scheduling
- Exhibits
- General Ledger
- In-Court Processing (Minutes)
- Joinders
- Judges View
- Judicial / Case Notes
- Notices
- Searches / Reports
- Statutes
- Till Management
- Warrants

FRAMEWORK

- Audit Trail
- Business Rules
- Cross Reference
- Filters
- Lookup Lists
- Metadata
- Navigation
- Notices Engine
- Persistence Engine
- Screen Builder
- Time Standards
- Workflow Engine

PORTAL

- Case Initiation
- Court Forms
- Document Insert
- Drupal
- Online Payment
- Organization Registration
- Practitioner Registration

DATA CONVERSION UTILITY

SECURITY

API

- *Data Access* – The Data Access module is the lowest layer in the application and is in charge of handling all communication with the DBMS. eSupervision uses the prominent open source Hibernate framework as the main method for query execution and persistence management. Hibernate manages the connection to the database and provides

Technology Information and Architecture

object/relational persistence and query services. Hibernate provides other important performance benefits such as built-in entity and query caching.

- *Metadata* – Customizable Metadata is an abstract layer right above the Data Access layer and is in charge of providing information about all the entities in the system to other modules such as Screen Builder or the REST API. This module enables clients to extend eSupervision baseline tables (entities) and add completely new fields, tables and relationships to the system without the need of additional development or eSupervision upgrades. This functionality allows clients to exactly meet their present and future data requirements. All the features provided by other modules, such as the Screen Builder, the Searches or the REST API, are equally available for these custom entities as they are for built-in entities.

- *Security* – See below in the security section.

- *Screen Builder* – The Screen Builder is one of the most often used administrative tools in the system. It not only gives clients control of the data being displayed on case-management screens, but also provides functionality to display the data in different views and styles (columnar vs. tree, grouping, different colors and icons, etc).

- *Searches & Reports* - eSupervision ad hoc reporting is done through its powerful configurable searches. eSupervision searches are built using eSupervision's custom search builder. The search builder provides an easy to use user interface for constructing both the search criteria and search results. Building searches does not require database knowledge and can be done in real time. Users can save commonly used search criteria, these "saved searches" can be displayed on the user's dashboards where they can be opened or run in one click. Each criteria field can be filtered using various operators, such as equals, greater than, less than, soundex, contains with wildcard support, and many more. Date differences, day of week, month, year, and other standard date functions are available when building criteria and results.

  From the search results users can select multiple results then execute bulk operations, such as reschedule event, update cases, update addresses, adding of attorneys, etc. The user can easily sort the search results by clicking the column headers and pagination size of the results can be controlled user. Search results can also be exported in multiple formats, including: Excel, XML, CSV, PDF, and RTF.

  eSupervision searches can be made into drill down searches by grouping on various search results. When grouping various aggregate functions are available, for example: averages, counts, maximums, minimums, and summations. Result data can also be pivoted to more advanced layouts.

  In cases where searches can provide the desired report, eSupervision also has a built-in support for Jasper Reports and Crystal Reports engines. These engine makes it possible to design professional looking reports, then register the report in eSupervision which can then be run against the live data or on the reporting database.

Technology Information and Architecture

In addition to on the spot execution of reports and searches they both can be setup on a schedule (ex: weekly, monthly, annual, etc.). eSupervision will automatically run these scheduled report / searches then the results will be emailed of posted on the appropriate user's dashboard.

- *Conditions & Business Rule Engine* – eSupervision condition engine is a custom, forward chaining processor built using a "best practices" approach for processing production/inference rules. These types of rules are used to represent behaviors of the type IF condition THEN action. For example, "IF pending charges still exist, THEN the case cannot be disposed". The key aspect of the business rule engine is that through a web administrative interface, clients can create and manage business rules in real-time without changing the underlying code.

  eSupervision also contains a complete business rule engine. This engine allows for easy management of custom rules. eSupervision includes standard business rules for automatic notice generation, automatic scheduling, official assignment, and many more. Users can modify these existing rules or create new rules using the user-friendly Groovy scripting language. Also, eSupervision interface allows for rules to be executed in test / debug mode, for rapid development.

- *Workflow Engine* – eSupervision's workflow engine allows for the processing of business procedures or "workflows" during which information or tasks and documents are passed from one participant to another in a way that is governed by rules or procedures. The workflow processor has complete access to the business rule engine to carry out all automated functions. By design, the workflow engine can exist on separate, dedicated clustered servers to increase efficiency.

  In addition to access to data elements the workflow engine can provided document manipulation services such as automated signing and stamping of documents.

  eSupervision also includes a workflow management console, which provides a complete view of all tasks inside a work queue and allows for modification to a single task or multiple tasks at once. Each work queue management screen contains a summary at the top of the page that details all open tasks for the queue along with the following: number of high priority tasks, number of unassigned tasks, number completed today, number received today, number past due, number due today, number due tomorrow, number due in two to three days, the number of tasks aged fifty to seventy-five percent, number of tasks aged over seventy-five percent, and how the queue is performing compared to the pre-configured tolerance levels. The statistics are provided for the entire work queue and also broken down by individual participating in the queue.

- *Web Services and API* – See Integration.

- *Dashboard* - The dashboard consists of multiple gadgets. Each user in the system can choose what gadget they wish to display on their dashboard and how they are organized. The gadgets can be organized in several layouts. eSupervision also has built in user based color schemes, enabling each user to choose look and feel they are most comfortable with.

Technology Information and Architecture

Gadgets can be rearranged by simply dragging them into position. Some of the currently supported gadgets are: saved searches, assigned cases, upcoming events, recent cases, embedded reports, work flow assignments, agency news, recently archived reports, embedded calendar, notepad, etc.

eSupervision dashboard is complete implementation of java portlet specification (JSR-168). The dashboard implementation based on an open standard allows for rapid development of future gadgets and allows for clients extend eSupervision's dashboard and develop their own gadgets.

Virtualization
On the server side eSupervision can run on bare hardware, as well as inside Virtual Machines, such as VMWare or Microsoft HyperV. eSupervision could also be fully hosted on the cloud such as Amazon's AWS.

On the client side, since the main requirement is a simple web browser such as Internet Explorer or Chrome, the users' Desktop environments could be virtualized in to fit the court/agency's IT infrastructure. No additional client server is typically required for eSupervision.

Integration with Other Systems
The ability to effectively exchange information between information systems is critical to the success of integrated justice information systems (IJIS). In older systems, APIs would be hard-coded for each integration point. This means every time the court/agency needed to send data to another justice court/agency these integration points would have to be hard coded. These hard-coded information exchanges are normally very expensive to develop and maintain and cannot be readily adapted to meet new requirements for information sharing including the ability to handle new information exchanges or to adapt to new standards.

eSupervision uses an Enterprise Service Bus (ESB) to manage and monitor data exchange between systems using their native APIs. An ESB is fundamentally an architecture. It is a set of rules and principles for integrating numerous applications together over a bus-like infrastructure. The core concept of the ESB architecture is that you integrate different applications by putting a communication bus between them and then enable each application to talk to the bus using a common, pre-agreed upon language. This decouples systems from each other, allowing them to communicate without dependency on or knowledge of other systems on the bus.

eSupervision's API utilizes the configurability of our Metadata layer and the Form Builder to allow dynamic API calls. With our configurable API, systems administrators can configure a brand-new data hierarchy and make it available to other departments when unique interface requirements arise. So instead of waiting weeks (sometimes months) for new API functions to be hard coded into the system, these functions can be rapidly prototyped, tested, and deployed without any new code.

- The system has multiple API endpoints implemented using both standard SOAP-based HTTP communication and REST. These allow third-party systems to communicate with eSupervision using generic XML or JSON formats. It eliminates the need for third-party systems to understand eSupervision's Java backend. The WSF complies with SOAP 1.1, WSDL 1.1 (Web Service Description Language),

and WS-I Basic Profile v1.1 specifications. These APIs allow for full CRUD (Create, Read, Update and Delete) operations for all entities in the system: 225 Case Entities, 34 Person Entities, 400+ Non-Case Entities.

- While the web services framework is robust and efficient in dealing with third party integration, Journal Technologies will meet with administrators to provide an alternative to systems that cannot work with web services protocols such as interfaces to an IVR system. Journal Technologies will likely provide a library of eSupervision functions available for C.R.U.D. (C - Create, R - Retrieve, U - Update, D - Delete) utilities dealing with entities and data in eSupervision. This hard-coded API can be consumed in either its Java format (jar files), in other Java systems, or by non-Java based systems such as .NET or VB6 by creating a JAVA-COM bridge which allows .NET developers to utilize the eSupervision functionalities straight into their code.
- eSupervision's workflow engine supports the configuration of triggers (such as the entry of a disposition on a case, a request for a bench warrant, or the entry of a probation violation) that can initiate an information exchange with another information system. Triggers can be conditioned to ensure that the information exchange occurs only under specific circumstances and the information exchanges can either be directly sent to the other information system or routed to a queue where they can be manually reviewed before being released.
- The full slate of business rules and validations are available to all transactions as if they were screens from within eSupervision itself. Open and Loosely Coupled Database - eSupervision utilizes an open source module called "Hibernate" as the main method for query execution and persistence management. Hibernate is a high performance object/relational persistence and query service for Java. Hibernate manages the connection to the database keeping eSupervision portable to all SQL databases. Although we generally propose Microsoft SQL Server, you can use any major JDBC-compliant database platform (Oracle, MySQL, etc.). For more information about Hibernate, go to http://www.hibernate.org<http://www.hibernate.org/>.

eSupervision is also compatible with the Citrix network, Microsoft Active Directory and LDAP.

Security

eSupervision has constructed a sophisticated security paradigm based on the Spring Security Framework (https://spring.io/projects/spring-security). This approach allows administrators to design their own flexible operational hierarchies of security levels using criteria such as court/agency, case type, role, etc.

All application objects (system functions or tasks, cases, business rules, forms, reports, etc) are passed through a security audit to check user privileges before proceeding with a transaction. Additionally, eSupervision allows for a number of sensitivity settings for case data including private, sealed confidential, and medically sensitive. Other points concerning security:

Technology Information and Architecture

- eSupervision supports multiple methods of authentication, including Microsoft Active Directory and LDAP, Single Sign-On, OAuth2. eSupervision also supports Remember-Me authentication, which allows the user to forgo the login prompt for a period of time when logging into eSupervision. Two-factor authentication is also supported.
- Multiple configurable password policies are supported, such as expiring passwords after [n] days, not allowing password reuse, minimum length and other strength measurements of passwords, etc. Password resetting is done through configurable secret questions. Passwords are never sent through email or any other means; they are only reset based on one-time tokens.
- An administrator defined timeout period can optionally cause the system to disconnect users who have been inactive for a set period of time.
- eSupervision validates that web application inputs to prevent against SQL injection or cross-site scripting attacks.

The following concepts are used in eSupervision's security:

User: A user is anyone who has access to the system. Users are authorized to perform tasks based on the group they belong to. Additionally, Access Control Lists (ACLs) can be used to grant special permissions to individual users.

Group: Groups are collections of users. Every user must belong to a group but cannot belong to more than one group. All rights ("Authorizations") to perform tasks are set at the group level. However, users of a group may not always have the exact same permissions to a resource because ACL entries may give them special permissions.

Authority: Authorities are defined by the system administrator and determine the access rights to resources (such as URLs, Tasks, Forms, etc.). Then groups are granted authorities. Each group can have multiple authorities granted to them.

Seals: Cases or documents can be sealed by inserting a seal record into the case or document. In addition to permanent seals, eSupervision supports sealing for a limited period of time by setting their start and finish dates.

The court/agency administrator can add permission to access sealed cases and documents to an existing authority or to an authority specifically created for this purpose. Then that authority can be granted to a user (through the user's group). Users with such authority can access sealed cases and documents.

Access Control List (ACL): ACLs are used for handling instance (or record) level security. Each secured object in the system may have an ACL. Objects can inherit ACLs from their parent objects (e.g. a Sentence can inherit ACLs from its parent Charge).

Security Rules: In cases where special security requirements cannot be satisfied with the built-in security methods, eSupervision provides hooks for writing custom business rules granting or denying access for specific situations.

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Access Levels: Access levels are another way to handle instance (or record) security and might be easier to configure and use than ACLs. Each authority in the system can be configured with an access level from 0 to 50. Each secured object can also be assigned a security level from 0 to 50. eSupervision will then check and prevent access to an object if the user has no authority with high enough access level for the corresponding object.

URL security: eSupervision also allows securing any page in the system based on its URL. This is perhaps the easiest way to configure security to prevent unauthorized access to certain areas of the application. For example, it can be used to prevent non-administrator users from ever getting to administrative pages.

A key part of any security implementation is the prevention of malware infiltration. eSupervision functions with all standard anti-virus or anti-malware programs.

Encryption

- ***Communication*** – To ensure full end-to-end encryption of all communication between eSupervision and the clients (either users' workstations or 3rd party applications), eSupervision should be run under https. It is our strong recommendation to run eSupervision with only with https protocol enabled. The eSupervision Installation Manual provides detailed step-by-step instructions on how to correctly configure the TLS/https settings for eSupervision.

- ***Passwords*** – To ensure that passwords will not be lost even in the event of a data breach, eSupervision saves the user passwords in the database using the strong BCrypt hash algorithm. This algorithm incorporates additional features (such as built-in salt and variable number of rounds) that makes it resistant to brute-force attacks.

- ***Other Secrets*** – To provide interoperability with external services such as Microsoft Exchange or Google Calendar, eSupervision allows the users to save their passwords for these system as part of their user profile in eSupervision. These passwords are encrypted in the database using the standard *PBEWithMD5AndDES* algorithm. The master password for this encryption algorithm can be saved in a protected storage provided by the host operating system. The master password can also be rotated periodically by the system administrator to provide additional safety for these saved secrets.

- ***Encryption for data at rest*** – eSupervision can encrypt specific database columns on demand. However eSupervision itself does not provide ways to encrypt the entire database. The vendor of the DBMS can provide options for encrypting the entire database or the database can use disks encrypted by the host operating system.

- ***Encryption of documents*** – When using eSupervision's built-in Document Management System, the actual document files are stored on the filesystem. eSupervision does not currently encrypt individual documents. If document encryption is necessary, the document storage can be configured to use a disk or folder that is encrypted by the host operating system.

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Auditing, Monitoring, Logging

- *Audit Logs and Version Tables* - The audit-logging feature in eSupervision is an essential part of the administration of the system. eSupervision provides full audit-logging capabilities for all the domain objects. The database contains version tables for each entity, where the modification of the data ("Create", "Update", and "Delete") is recorded. This includes information about the user, the time, the action that was performed ("Create", "Update", "Delete"), the name and the record number of the affected entity, the IP number of the client browser, etc. Additionally, these changes are grouped by database transactions, that they were part of. The version tables are useful not only for auditing purposes, but also for recovering accidentally changed or deleted information.

- *Application Logs* - As part of normal operations eSupervision writes lots of log messages (error, debug, info, and warning) into log files. The log files are important for troubleshooting issues that are not easy to reproduce. The log files are restricted in size and in number, and are automatically rotated by eSupervision. These ensures that there will be enough information in the log files when needed and also allows controlling the amount of space the log files will take on the disk. Similarly, the application also generates access log files, that contain information about the time and the duration of access as well as the resource accessed.

  eSupervision also logs and keeps track of other metrics during normal operations. For example all searches, reports, business rule executions are logged into appropriate database tables, including detailed timing information. This type of logging is useful both for auditing, but also for finding out slow running searches, reports or rules, and give us the opportunity to optimize them. They also provide a good way of detecting system performance regressions over time or from version-to-version.

- *Monitoring* - eSupervision has built-in tools for self-monitoring, such as system memory or CPU use. However, it's typically better to use 3rd party tools for monitoring the system externally, as they provide a more independent view of the system. There is a vast selection of 3rd party tools – both free and commercial - to monitor a standard Java web application running under the standard Tomcat application server. All of these tools can be directly used with eSupervision. We are also working with independent vendors that can provide monitoring both for our cloud solutions as well as customers who are hosting on their own.

Sole Sources

Project Name	Crash Data Grouo, Inc.
Attachments	Sole Source Notice
Contact	Joydan Holley, jmholley@dekalbcountyga.gov
Project Name	FARO VR Notebook ande Software Maintenance Subscription
Attachments	Sole Source Notice
Contact	Monique McCrear, mcmccrear@dekalbcountyga.gov
Project Name	Runbeck Election Services, Inc., Vote Center Hubs
Attachments	Sole Source Notice
Contact	Jennifer Schofield, jjschofield@dekalbcountyga.gov
Project Name	BCDR Microsoft Consulting
Attachments	Sole Source Notice
Contact	L. Deneen Walters, ldwalters@dekalbcountyga.gov
Project Name	Permits Unit Maintenance Agreement
Attachments	Sole Source Notice
Contact	Joydan Holley, jmholley@dekalbcountyga.gov
Project Name	JustWare Upgrade to eSupervision
Attachments	Sole Source Notice

Contact	Tynia Inu-Umoru, tinuumoru@dekalbcountyga.gov
Project Name	Electronic Warrant System
Attachments	Sole Source Notice
Contact	Will Parker, wmparker@dekalbcountyga.gov