

***This is a draft copy of the Scope of Services for a new
SOCIAL SERVICES CASE MANAGEMENT SYSTEM***

ISSUED BY MIAMI-DADE COUNTY:

Information Technology Department

Request for Information for Social Services Case Management System

The Miami-Dade County Information Technology Department will be conducting a vendor conference call on February 10, 2015 to review the enclosed Statement of Services. The objective is to listen to comments from the vendor community on ways to enhance the scope, and answer any questions that may come up. The conference call is scheduled for two hours.

*******Vendor Conference call is scheduled for February 10, 2015**

*******Time: 10:00 AM-12:00**

Please join the meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/423582949>

You can also dial in using your phone.

United States (Long distance): +1 (571) 317-3112

Access Code: 423-582-949

More phone numbers: <https://global.gotomeeting.com/423582949/numbersdisplay.html>

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**REQUEST FOR INFORMATION (RFI)
FOR
SOCIAL SERVICES CASE MANAGEMENT SYSTEM**

2.0 SCOPE OF SERVICES

2.1 INTRODUCTION

Miami-Dade County, hereinafter referred to as the County, as represented by the Miami-Dade County Community Action Human Services Department (CAHSD), is soliciting information for an automated Web based integrated Social Services Case Management System that is flexible and configurable to meet the changing needs of the county. The proposed social services system should be capable of mobile intake and assessment, electronic case management, GIS integration, standard and custom report capabilities, and system interfaces.

We require a social services system capable of meeting the requirements outlined in this Section 2.0 including but not limited to application software licenses, implementation, configuration, testing, planning, data migration, documentation, training, and subsequent software maintenance and support services throughout the term of the resultant contract. A commercially available software solution that supports automation of all necessary functions related to the overall Web based integrated Social Services Case Management System process is being sought. The software shall contain the following functions:

1. **Intake and Assessment:** A comprehensive and integrated software tool that collects and manages client information, assessments, referrals and services needed and provided.
2. **Program Tracking:** Ability to track provided services by program. Ability to manage outcome measures by program.
3. **Reporting:** Generation of standard and customized reports using any combination of all data elements maintained by the Web based integrated Social Services Case Management System. Generate official reports (e.g. CSBG, ROMA) and capacity to link and download data.
4. **System Interfaces:** Ability to import/export data. Ability to import datasets to Active Strategy Enterprise (ASE) system and other programs to be able to perform higher end statistical analysis of data.
5. **Security** – Meet the confidentiality requirements under HIPPA, and encryption of sensitive data.

2.2 BACKGROUND

CAHSD is seeking a software solution in an effort to coordinate social services, eliminate redundancy, and maximize the use of funding and resources within the CAHSD programs and providers.

Miami-Dade County's CAHSD is charged with the responsibility of providing social services to its citizens through the following programs; Service Centers, Child Care and Development, Citizen Participation, Counseling and Rehabilitation, Elderly and Disability Services, Home Assistance, Job Skills, and Special Services.

Current Social Services Systems Operating Environment

A. Social Services Information System (SSIS)

A Web based social services case management system currently hosted at the vendor's site (Bowman Systems, Inc.)

B. Mainframe Social Service Systems

Legacy applications (IDMS/ADSO/COBOL) for the management of services provided to the elderly and disabled, adult day care, rehabilitative services, energy assistance, volunteer programs, and transportation.

Mainframe hardware infrastructure currently comprised of twin IBM Z/10 P03/2098 processors.

Mainframe software infrastructure in an in-house Database Management System (DBMS) running Multiple Virtual System (MVS). Its runs in three environments: Test, Staging and Production. The system availability is 24 hours per day, 7 days per week. The CAHSD mainframe systems use a non-relational networked Integrated Data Management System (IDMS) database Release 16.0 running on IBM ZOS release z10 BC (Business Class) 2098 E10/p03.

Online modules for these Mainframe systems are written in Application System Development Online (ADSO) and batch programs are written in Common Business Oriented Language (COBOL) and Statistical Analysis System (SAS).

C. Current CAHSD mainframe system interfaces:

Criminal Justice System – to obtain case information for their Drug Court clients and send data to the Drug Court system on a daily basis.

GIS – to receive Commission District information.

LIHEAP and EHEAP

D. User / License Quantity

CAHSD currently has 403 users

E. Connectivity

All CAHSD facilities are equipped with high-speed Internet connections. CAHSD mainframe systems run over a telnet 3270 session on the existing County network infrastructure.

2.3 CURRENT PROCESSES

- a) **Service Centers** provide a variety of social services to economically disadvantaged individuals and families interested in achieving self-sufficiency. These services are provided through CAHSD Family and Community Services and are offered at various service centers throughout Miami-Dade County. These services include:

- Arts and Crafts Classes
- Care to Share Program
- Citizenship Classes
- Citizen Involvement and Participation
- Computer Training
- Dial-a-Life Program
- Emergency Food and Shelter Program (EFSP)
- Employment Preparation and Training
- English for Speakers of Other Languages (ESOL)
- Family Development
- Farm Share Program
- Food and Clothing Distribution
- Grandparents Raising Grandchildren Initiative
- Housing Assistance Grant
- Housing Initiative

- Immigration Assistance
- Information and Referrals
- Lifeline and Linkup Telephone Service
- Notary Assistance
- Senior Housing Assistance Repair Program (SHARP)
- Volunteer Income Tax Assistance (VITA)
- Voter Registration

b) Child Care and Development

- Head Start and Early Head Start

c) Citizen Participation

- Community Advisory Committees
- Election Orientation meetings

d) Counseling and Rehabilitation

- Domestic Violence
- Family and Youth Programs
- Homeless Programs
- Substance Abuse Programs

e) Elderly and Disability Services

- Care Planning
- Foster Grandparent Program
- Home Care
- Meals for the Elderly
- Meals on Wheels
- Retired and Senior Volunteer Program (RSVP)
- Specialized Senior Centers
- Senior Companion Program

f) Home Assistance

- Home Beautification
- Home Repair Program
- Housing Rehabilitation Program
- Paint and Hurricane Shutter Program
- Low Income and Elderly Home Energy Assistance Programs (LIHEAP and EHEAP)
- Rental Assistance
- Senior Housing Assistance Repair Program (SHARP)
- Single Family Loan Rehabilitation
- Solar Water Heater
- Weatherization

g) Job Skills

- Computer Training
- Farmworkers Training
- FATHERS Project
- The Greater Miami Service Corps (GMSC)
- Internship Program

h) Special Services

- Adult Day Care
- Disability Services
- Immigration Assistance
- Refugee Assistance

- Tax Preparation
- Veterans Services Program

2.4 DESCRIPTION OF SOFTWARE/SERVICES NEEDED

The proposed system must be a turnkey system that, at a minimum, contains two major components, an internal user portion for CAHSD activities. All applicable software licenses, implementation services, integration services, configuration services, customizations, training, and maintenance support services should be included.

All licenses that may be required to access third party software are to be included with the proposed system. The County will not purchase licenses for third party applications which are integrated into the proposed solution. In the event that the proposed solution requires third party software licenses in order to meet the technical and functional requirements of this solicitation, during contract negotiations, the County reserves the right to leverage software license agreements that may be in place between any proposed third party software copyright holder and the software acquisition or maintenance costs.

Proposers are required to meet the Miami-Dade County Technology Standards outlined in Appendix 1.

2.5 INTERFACES TO BE PROVIDED

The proposed system shall be required to interface with various County systems as outlined below. Proposers shall provide a detailed description of the methodology to be used for such development in the Proposer Information Section.

Interface No. 1

<u>Interface System</u> CAHSD-SSPWeb	<u>Database</u> SQL Server DB	<u>Data Flow</u> One Direction (To proposed system)
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The proposed system will receive client information from the SSPWeb system. The interface will provide CAHSD staff with real-time client information needed to accurately assess/evaluate, follow-up, monitor and track clients/cases.

Interface No. 2

<u>Interface System</u> CJIS	<u>Database</u> IDMS Mainframe (MVS)	<u>Data Flow</u> Bi-directional (To and from proposed system)
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This bi-directional interface with the Criminal Justice Information System (CJIS) is required to receive, and update clients CIN and CJS case numbers.

Interface No. 3

<u>Interface System</u> COC Drug Court System	<u>Database</u> N/A	<u>Data Flow</u> One Direction via SFTP (From proposed system)
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This interface is required to electronically transfer Drug Court clients' information to the Clerk of the Court's Drug Court system on a daily basis.

Interface No. 4

Interface System

GIS

Database

ORACLE 11g

Data Flow

Bi-directional
(To and from proposed system)

This GIS interface will be required to perform address validation (edit, store and display), during Client intake, to ensure that the address adheres to County USPS standards. It should also provide geographical information, such as Commission District and maps.

Interface No. 5

Interface System

South Florida Behavioral Health Network

Database

N/A

Data Flow

One direction via SFTP
(From proposed system)

This interface will be required to send South Florida Behavioral Health Network the data mandated by the State of Florida for their Rehabilitate Services Program on a predetermined schedule by the SFBHN.

Interface No. 6

Interface System

Drug Testing Laboratory

Database

N/A

Data Flow

One direction via SFTP
(To proposed system)

The proposed system must be able to store lab test results uploaded from the contracted laboratory on a daily basis for Rehabilitate Services Program clients.

2.6 TECHNICAL SUPPORT AND MAINTENANCE SERVICES TO BE PROVIDED

The selected Proposer shall provide technical support and maintenance services for the proposed system throughout the term of the contract. These services shall include updates and upgrades to proposed system to maintain compatibility with future County hardware and software infrastructure. Maintenance Services shall include corrections of any substantial defects, fixes of any minor bugs, and fixes due to any conflicts with mandatory operating system security patches as well as upgrades to new version releases. Both Production and Non-production environments, such as testing and staging shall be covered under Maintenance Services. The selected Proposer must have a live support help desk available Monday through Saturday between the hours 7:00 AM to 7:00 PM on a toll free basis for to assist the County with technical support issues. If problem is not resolved remotely, within 24 hours of initial contact and if requested by the County a credit will be issued for loss of use. All software upgrades issued by the selected Proposer shall be provided to the County at no additional charge, within 6 months. Proposers should provide a detailed description of technical support and maintenance services to be provided in the Proposer Information Section.

2.7 TRAINING SERVICES TO BE PROVIDED

The selected Proposer shall provide on-site training on the proposed system for a minimum of 67 users, broken down into user appropriate sessions for the following groups:

Operational Users	30
Administrative Users	25
System Administrators/IT Staff	12

The selected Proposer must provide all necessary documentation on the proposed system, customized for the County, both in hard copy and in electronic format. Facilities and computers will be provided by the County for the purpose of conducting such training. Additional shall be made available via on-line videos or other resources on an ongoing basis throughout the term of the contract awarded as a result of this solicitation. Proposers should provide a detailed description of the training services to be provided in the Proposer Information Section.

2.8 IMPLEMENTATION SERVICES TO BE PROVIDED

The selected Proposer shall be responsible for providing on-site installation and configuration services for the proposed system. The selected Proposer shall be responsible for testing the proposed system and insuring proper functionality prior to launching in the production environment. Proposers should provide a detailed description of the implementation services and timeline in the Proposer Information Section.

2.9 SYSTEM FUNCTIONALITY

2.9.1 General Technical Requirements/Services

Proposers are required to complete the General Technical Requirements/Services table outlined in the Proposer Information Section, indicating whether the proposed system meets, does not meet, or requires customization to meet the outlined requirements.

2.9.2 Desired Technical Requirements/Services

Proposers are required to complete the Desired Technical Requirements/Services table outlined in the Proposer Information Section, indicating whether the proposed system meets, does not meet, or requires customization to meet the outlined DESIRED requirements. The requirements outlined are preferred by the County, but do not hold the same importance as the General Requirements.

2.10 ESCROW SERVICES

Proposer’s are encouraged, but not required to provide a detailed description of a software escrow agreement with a licensed third party agent to house the source code associated with the proposed system at the time of contract award. A detailed description can be provided in the Proposer Information Section. Such escrow services may be purchased at the option of the County.

2.11 OPTIONAL PRODUCTS AND SERVICES

Proposers are encouraged but not required, to offer Optional Products and Services to the County. This may include alternative software that is offered by Proposers, an optional Hauler Permitting module or additional interface development for the interfaces described below. All optional products and/or services must be included in Form B-1, Section C. Such optional products and/or services are not included in the evaluation of proposals and are to be contracted at the sole discretion of the County.

Optional Module

This section is left blank on purpose as a sample.

Background

Software To Be Provided

Optional Interface No. 1

Optional Interface System

Database

Data Flow

2.12 OPTIONAL ENTERPRISE SOFTWARE LICENSE AND MAINTENANCE AND SUPPORT

If Proposer’s software licensing model is other than an Enterprise Software License, Proposers are encouraged but not required, to offer an enterprise license and associated maintenance support. **If a Proposer offers an “Optional Enterprise Software License and Maintenance and Support”, it must use the attached Form B-1.** The “Optional Enterprise Software License and Maintenance and Support” are considered optional services not included in the Scope of Services and are to be contracted at the sole discretion of the County.

Appendix 1
Miami-Dade County
Information Technology Department
Technology Model

Distributed Operating Systems	<ul style="list-style-type: none"> ➤ Windows 2008 Enterprise Edition ➤ AIX 6.1 or Higher ➤ Red Hat Linux As 6 Or Greater ➤ VMware ➤ Oracle Unbreakable Linux 5.3 Or Higher ➤ OSX
Mainframe OS and OLTP	<ul style="list-style-type: none"> ➤ Z/OS 1.11- upgrading to 1.13 in July 2012 ➤ Z/VM Release 6.2 ➤ Z/Linux SUSE SLES 11 Or Greater ➤ CICS V4R1
Database	<ul style="list-style-type: none"> ➤ Oracle Enterprise Edition Release 11.2.0.3 RAC Certified Systems (Enterprise Solution) ➤ AIX Oracle Non-RAC 11.2.0.2 ➤ MS SQL 2008 Enterprise 64 bit ➤ Oracle MySQL for Wordpress and PHP solutions
Hardware	<ul style="list-style-type: none"> ➤ IBM Z Series mainframe (2 IBM 2098-E10/P03) – 7 LPARS – 2 VM partitions virtualizing Z/Linus Servers ➤ HP model servers with Integrated Lights Out (ILO) ➤ HP blade server with VIO option ➤ HP blade servers with CITRIX XenServer for XenApp virtualization ➤ HP blade servers with CITRIX Xen Server for XenDesktop virtualization ➤ Wintel servers with VMWare virtualization software ➤ HP Proliant dual core servers ➤ IBM pSeries servers (model 9119-FHA known as a p595) and IVR 9131-52A known as p520Workstations - preferred manufacturer (Dell) ➤ Thin Client Workstations – WYSE C10LE ➤ Mobile Devices – Blackberries, iPhone, iPad, Android
Network	<ul style="list-style-type: none"> ➤ Fiber channel (BROCADE Fiber switches – Fe1, Fe2, Fe4, Fe40) ➤ TCP/IP Communications Protocol ➤ Network Switches ➤ Telephone Switches ➤ Telephone Equipment ➤ DSL ➤ FiCon ➤ SolarWinds ➤ EdgeSight monitoring ➤ Remote locations connected to central County location with varying speeds from ADSL 256kbps to 1gbps for core sites ➤ Microsoft DNS ➤ Citrix SSL VPN ➤ Citrix Access Gateway
Storage	<ul style="list-style-type: none"> ➤ Tier 1 SAN storage – IBM DS 8100, DS8300 ➤ Tier 2 SAN Storage – HP HSV SANS with Fiber Channel ➤ Tier 3 SAN Storage – HP HSV SANS with FATA high density low performance disk ➤ Tier 1 Tape Storage – SUN/STK SL8500 – 9940B Tape Drives ➤ Tier 2 Tape Storage – SUN/STK SL500 – LT02, LT04
Storage Management	<ul style="list-style-type: none"> ➤ Veritas NetBackup 6.0 for all distributed systems backups ➤ Veritas Cluster Series ➤ Veritas Global Clusters ➤ Veritas Global Replicate ➤ Veritas Volume Manager

	<ul style="list-style-type: none"> ➤ AIX Power-HA formerly HACMP 6.1 or greater ➤ IBM-HSM for mainframe backup and recovery ➤ Innovation FDR for mainframe backup and recovery ➤ CA/Disk for mainframe backup and recovery
Security	<ul style="list-style-type: none"> ➤ RACF (mainframe security) ➤ Trend Anti-Virus for servers
Distributed Application Development	<ul style="list-style-type: none"> ➤ ASP.NET ➤ Visual Studio 2008 (VB & C#) ➤ Rational Application Developer ➤ Rational App Scan ➤ .Net Framework 1.1, 2.0, 3.0, & 3.5 ➤ J2EE JDK 1.4 ➤ Objective-C for iOS SDK ➤ PHP5
Applications Desktop & Enterprise	<ul style="list-style-type: none"> ➤ Microsoft Outlook 2007 or higher ➤ Microsoft Internet Explorer 7 & 8 ➤ MS Office 2007 or higher ➤ Citrix (Thin Client Access – Citrix Metaframe)
Enterprise Applications	<ul style="list-style-type: none"> ➤ PeopleSoft ERP using WebLogic and Tuxedo ➤ ESRI software products for GIS (ArcGIS Server, ArcSDE, ArcInfo, ArcEditor, ArcIMS) ➤ Infor Asset Management ➤ MicroSoft Exchange ➤ Documentum Electronic Document Management System
Middleware	<ul style="list-style-type: none"> ➤ IBM MQ Message Broker and Workflow ➤ WebSphere Application Server 6.1 ➤ IIS 6.0, & 7.0 ➤ Microsoft Office SharePoint Server 2010 ➤ WebSphere Portal Server ➤ Shadow z/Services for CICS
Systems and Asset Management	<ul style="list-style-type: none"> ➤ HP Insight Manager/SIM (for HP hardware management) ➤ HP Continuous Access Replicator ➤ MS SCOM, MS SCCM ➤ Enterprise Network & System Management <ul style="list-style-type: none"> ○ IBM Tivoli Monitoring ○ IBM Tivoli Network Manager ○ IBM Tivoli Netcool Omnibus ○ IBM Tivoli Composite Application Manager for Transactions ○ IBM Tivoli Composite Application Manager for SOA ○ IBM Tivoli Composite Application Manager for WAS ○ Tivoli Application Dependency Discovery Manager ○ IBM Tivoli Change and Configuration Management Database (Maximo) ➤ Scheduling Software Tivoli Workload Scheduler (OPC) – all platforms
Data and Information Management	<ul style="list-style-type: none"> ➤ SQL Reporting Services ➤ IBM Content Manager OnDemand Online Reporting ➤ CA/Dispatch Online Report bundling/printing/viewing ➤ IBM Cognos BI 10.x on Z/Linux for Business Analytics ➤ MetaManager
User Identification and Authentication	<ul style="list-style-type: none"> ➤ Active Directory ➤ Tivoli Identity Manager ➤ RACF for Z/OS

Information Technology Department Technology Model – Database Systems

Background:

ITD provides Database services for applications on five distinct DBMS platforms, of which only 2 are approved for new system development or implementation of new vendor packages.

- The CA-IDMS mainframe based DBMS running under MVS is available only for maintenance and minor enhancements of existing legacy applications.
- The IBM DB2 mainframe based system is a turnkey database used exclusively for On-Demand report management on the mainframe and further development is not allowed.
- The IBM UDB distributed database on the AIX platform is used exclusively as a turnkey DBMS in direct support of specific IBM products that do not support our standard new systems RDBMS platforms. No development is allowed on this RDBMS platform.
- For new system development or implementation of vendor packages the two DBMS platforms are MSSQL and Oracle. An architectural review would be needed to determine the best DBMS platform for any given application. Factors used to determine the best DBMS platform include, but are not limited to, number of users, data type, total database size, transaction counts, DR, COOP, HA and multi-site co-processing requirements, integration(s) with other systems, internet vs. intranet usage, mainframe legacy interface, and reusability of existing enterprise components.
 - The MSSQL DBMS runs on the Windows 64 bit platform.
 - The Oracle RAC RDBMS system on the Redhat Linux; non-RAC Oracle DBMS runs on AIX platform. Application databases that are CPU and/or I/O intensive are best suited for the AIX Oracle platform.

ITD Infrastructure Current Technology Model Database Systems

Current Release Levels by Product:

IDMS	IDMS Release 17.0 running on IBM ZOS release 1.11 moving to 1.13
DB2	DB2 Release 8 running on IBM ZOS release 1.11 moving to 1.13
UDB	UDB Release 8 to 9 running on AIX release 5.3 moving to 6.0
MSSQL	MSSQL Enterprise 64 bit running on Windows 64 bit HP Servers
Oracle	Oracle Enterprise Edition Release 11.2.0.3 RAC Certified Systems running on Linux Redhat release AS 6 or higher on HP servers or AIX release 6.1 Oracle Edition Release 11.2.0.2– Partitioning is not available.

Current Infrastructure Configuration:

For purposes of this document the IDMS DB2 and UDB infrastructure configurations will not be described since new development or new systems installations are not authorized on these platforms.

MSSQL

The current County-wide shared platform consists of:

- In the Production environment 2 sets of clustered servers each consisting of 2 HP servers with 2 dual core processors running Windows 64 bit and MSSQL 64 bit.

- In the Test environment 1 set of clustered servers consisting of 2 HP servers with 2 dual core processors running Windows 64 bit and MSSQL 64 bit.
- Planned implementation of a mini-warehouse cluster consisting of 2 HP servers with 2 dual core processors running Windows 32 bit and MSSQL 32 bit. This platform will also support legacy link services between MSSQL to Oracle. Due to the inherent stability issues of this type of link service, current legacy systems requiring this service are located in this infrastructure with lower than 95% availability expectations.
- Planned implementation of a small Disaster Recovery Stand-by cluster to be located at the NAP consisting of 2 HP servers with 2 dual core processors running Windows 64 bit and MSSQL 64 bit.

Oracle

The current County-wide shared platform consists of:

- Two Production Multi-Node Oracle RACs consisting of multiple HP 2 dual core servers running Redhat Linux for DBMS systems that fully conform to County standards of operation.
- One Test Multi-Node Oracle RAC consisting of multiple HP 2 dual core servers running Redhat Linux.
- One planned Production Multi-Node RAC consisting of multiple HP 2 dual core servers running Redhat Linux for DBMS systems that do not fully conform to county standards of operation.
- One planned Test Multi-Node RAC consisting of multiple HP 2 dual core servers running Redhat Linux for DBMS systems that do not fully conform to County standards of operation.
- One planned Production Standby and Co-processing Multi-Node RAC consisting of multiple HP 2 dual core servers running Redhat Linux located at the NAP for DBMS systems that require either standby Disaster Recovery operations or require full 24x7 co-processing systems.
- Two planned Production Multi-Node Oracle RACs consisting of multiple HP 2 dual core servers running AIX for DBMS systems that fully conform to County standards of operation.
- One planned Test Multi-Node Oracle RAC consisting of multiple HP 2 dual core servers running AIX.

Within the County-wide Oracle platform customers may select service levels as follows:

- Standard availability 7 a.m. to 7 p.m. Monday to Friday – Non Mirrored Storage
- Standard availability 7 a.m. to 7 p.m. Monday to Friday – Mirrored Storage
- 24 x 7 availability - Non Mirrored Storage
- 24 x 7 availability – Mirrored Storage
- 24 x 7 availability – Mirrored Storage – with offsite standby databases
- 24 x 7 availability – Mirrored Storage – with two site co-processing databases

The County also maintains application specific infrastructures in the AIX and SUN Solaris environment for specialized use systems such as GIS, EDMS, ERP and the like.

ITD Infrastructure Current Technology Model Database Systems

Restrictions of Use:

The following general restrictions of use apply to all platforms.

- Access to Production is locked down for access by pre-programmed application sets only.
- Application systems or users are not authorized the use of system administrator or database owner privileges in the production or test environments. Database or Schema Owner privileges are allowed in the test environments when requested.

- Users connecting to the database through the applications must do so with a unique userid known to the DBMS system. The application must encrypt the password in such a way that the particular user id cannot be used for logon through some other third party tool using an ODBC connection such as Toad or MS Access.
- Applications requiring data auditing must include auditing within the application.
- Databases or portions thereof may not be transported offsite or copied to test systems without the expressed authorization of the ITD Security Administrator.
- The database infrastructure is dedicated exclusively to managing requests for data contained in the database. Application program sets are not authorized execution in DBMS specific infrastructure. Limited availability of an application specific FTP area will be considered when no other option is available.
- All systems are subject to review and possible denial of service of high resource using SQL statements that impact other users or applications. The database support staff is available to assist application developers in pinpointing problem areas and suggesting possible improvements or design changes to alleviate these high resource SQL queries.
- Any application whether vendor supplied or developed by County staff must provide certification of use on new vendor releases or patches no more than 90 days after the DBMS provider announced General Availability Date. Any DBMS vendor security patch must be immediately certified for use by the application and will be applied as soon as is feasible upon DBMS vendor release.
- The County will not provide support to any database that is not on the current supported release level of the DBMS vendor.
- Storage for databases are provided exclusively through SANs (Storage Array Systems) provided by both HP and IBM devices.
- Images and text documents are not authorized for storage in a database.
- Changes to Production must follow currently published ITD Change Management procedures.

**ITD Infrastructure
Current Technology Model
Database Systems**

Restrictions of Use (cont.):

MSSQL

- Previously known as DTS processing now under the name of SSIS (SQL Server Integrated Services) is not a clustered application. Therefore availability of this service is not guaranteed.
- Mirrored storage is not provided in the MSSQL infrastructure.
- Applications requiring data encryption must include encryption modules within the application.
- Link services between SQL to Oracle are not provided – (however Oracle to SQL link services are provided).
- SQL Report services are not supported as an operational component within the County-wide SQL database infrastructure.

Oracle

- All Systems targeted for the RAC must be RAC Compliant at the current release level supported by the County infrastructure.
- Only Oracle features available from the Oracle Enterprise Edition are available for use. The Oracle Key Features Summary (below) outlines those features that are currently supported.
- Standby and co-processing databases are limited to like infrastructures for the master and standby systems or the co-processing infrastructure.

Oracle Key Feature Summary	<u>Enterprise Edition</u>
Windows	Not Supported
Linux	Supported
Unix AIX	Supported
64 Bit Support	Supported
Total Recall	\$Option
Active Data Guard	\$Option
Fail Safe	Supported
Flashback Query	Not supported
Flashback Table, Database and Transaction Query	Not supported
Oracle Secure Backup	Not supported
Server Managed Backup and Recovery	Supported
Real Application Clusters	Supported
Integrated Clusterware	Not supported
Automatic Workload Management	Not supported
Java, PL/SQL Native Compilation	Supported
Oracle Database Vault	\$Option
Oracle Audit Vault	Not supported
Oracle Advanced Security	\$Option
Oracle Label Security	\$Option
Secure Application Roles	Supported
Virtual Private Database	Supported
Fine-Grained Auditing	Supported
Proxy Authentication	Supported
Data Encryption Toolkit	Supported
Oracle SQL Developer	Supported

Application Express	Not supported
Java Support	Supported
Comprehensive XML Support	Not supported
PL/SQL and Java Server Pages	Supported
Comprehensive Microsoft .Net Support, OLE DB, ODBC	Supported
Real Application Testing	\$Option
Enterprise Manager	Supported
Automatic Memory Management	Supported
Automatic Storage Management	Supported
Automatic Undo Management	Supported
Advanced Compression	\$Option
OLAP	\$Option
Partitioning	\$Option
Data Mining	\$Option
Transportable Tablespaces, Including Cross-Platform	Not supported
Star Query Optimization	Supported
Information Lifecycle Management	Not supported
Summary Management - Materialized View Query Rewrite	Not supported
Oracle Warehouse Builder	\$Option
Oracle Streams	Supported
Advanced Queuing	Supported
Workflow	Not supported
Distributed Queries/Transactions	Supported
XML DB	Not Supported
Multimedia	Not supported
Text	Not supported
Locator	Not supported
Spatial	\$Option
Secure Enterprise Search	Not supported
Oracle Content Database	\$Option

\$Option = Currently not supported by the County - Additional Funding for Licenses and Support Staff Required

**Miami-Dade County
Information Technology Department
Hosting Requirements**

ITD will provide Enterprise Hosting Facilities and Technical Support to the Customer for monitoring and maintaining operations of infrastructure environments to include Application support.

Concept of Operations

- Refer to *Technology Model* document for supported hardware/software components.
- Changes to the Production environment shall be introduced through the change management procedures as described by the section *Change Management Process* in this document.
- The Customer’s Test and Staging Environments will be hosted and supported by ITD; notification of downtime will be provided with as much advance notice as possible.

- All user-ids must be unique and created using the Miami-Dade County Central Registration System (CRS).
- Requested modifications in a shared environment may be restricted during prime time given their potential requirement for large system resources to execute. Changes of this nature will be scheduled at a time mutually agreed upon.
- Applications to be deployed to the Websphere Application Server (WAS) environment must be packaged for deployment using the Websphere Deployment Manager.
- ITD does not offer any type of remote shell access under any circumstances, including TELNET, Secure Shell Protocol (SSH), Secure File Transfer Protocol (SFTP) or Secure Copy Protocol (SCP).
- ITD is restricted from implementing changes during periods of “moratoriums” such as during countywide Elections and Tax Collection season. These moratorium periods are well established ahead of time and enforced through the *Change Management Process*.
- Vendors and contractors will be made aware of previously established production on-call procedures and will be asked to comply with them.
- Vendors must provide minimum hardware requirements.
- Vendors must provide recommended architecture.
- Vendors must have in-house staff with knowledge on technologies listed on the *Technology Model* document for system set-up and support.
- For vendor owned equipment housed in County facility (co-located) where the vendor supports and maintains the equipment while the County provides electricity, air conditioning and may swap out tape trays for backups:
 - For Intel-based equipment
 - Equipment must be rack mountable.
 - County can provide virtualized servers within the shared services infrastructure based on vendor supplied configurations.
 - For non Intel-based equipment
 - An environmental analysis will need to be conducted before the County can determine if space and the associated environmental requirements are available.
 - All the currently billable costs for network connectivity to Metronet still apply.
 - County does not endorse equipment that requires stand-alone tape backup trays and prefers that the vendor solution can be integrated within the existing Veritas NetBackup shared infrastructure.

UNIX/Linux Environment

- Administrator and UNIX/Linux root privileges are limited to ITD Technical Support staff.
- rootvg volume group will not be used to house any databases or any non-operating system data. Databases, application data and logs will be stored in file systems created outside of rootvg.
- Installation of software that needs to be installed as root needs to be performed by or conjunction with ITD Technical staff.
- Application software is prohibited to run as root.
- O/S rootvg will be mirrored between 2 different physical disks.

- Applications must supply Startup and Shutdown scripts for both normal Startup/Shutdown and Emergency Shutdown.
- All connectivity to servers is accomplished through SSH. The following protocols are disabled Telnet, rsh and rcp.

Database Management

- Access to the Production database environment with DBA/SA privileges is limited to the ITD authorized database support.
- It is the responsibility of ITD DBA staff to migrate new database objects to the production database (at times deemed appropriate).
- The application must encrypt the password in such a way that the particular user-id cannot be used for logon through some other third party tool using an Open Database Connectivity (ODBC) connection such as TOAD or Microsoft (MS) Access.
- Databases or portions thereof may not be transported offsite or copied to Test systems without the expressed authorization of the ITD Security Administrator.

Security Requirements

- Operating system security patches are applied as soon as they are made available through an automated process. Custom patching windows can be created to accommodate availability needs.
- All systems will undergo initial application and host vulnerability scans, prior to being placed into production. High severity applications and systems vulnerability issues identified must be corrected prior to the system being placed into production. The County utilizes multiple vulnerability scanning products including but not limited to Qualys, WebInspect, Rational AppScan and MetaSploit.
- Regularly scheduled periodic rescans will be performed on the system and any deficiencies or vulnerabilities identified must be immediately remediated.
- Application vulnerability rescans must be requested of all new or updated application code prior to release to production. All critical vulnerabilities must be remediated before the application code will be authorized to be migrated to the production environment.

Software Release Levels Supported

- All vendor-supplied software supported by ITD must have an active vendor maintenance agreement and must be kept up to current release levels. Operating system security patches are applied as soon as they are made available

Software License Renewal

- ITD will manage all infrastructure licensing and maintenance contracts. Versions of software which are not supported by the vendors will not be supported by ITD.

Application Test/Staging Environment

- All systems must have at least a Production and Test environment.
 - A Staging environment is recommended when multiple versions of system software and applications are required.
 - A separate reporting, batch or Staging environment can be established where there is a need and the budget allows it.

- Production and Test server-side software installation and upgrades will be performed by ITD staff and will follow ITD's *Change Management Process*
 - Maintenance services will include correction of any defect affecting any of the components of the infrastructure. Resolutions of problems may be delivered in the form of a patch, maintenance update, procedural work around or installation of a new release. Some corrections may be required to be implemented immediately. In those instances, the *Change Management Process* may be expedited. Changes or patches dealing with Security vulnerabilities are expedited and must be treated as very high priority.
- Support services for the Test/Staging environments are available through ITD with on-site support between the hours of 8 am and 5 pm Monday through Friday, excluding County Holidays, unless coordinated in advance. The Application Test database environment is available with support from the on call staff from 7 am to 7 pm, Monday through Friday, excluding County Holidays, unless coordinated in advance. The Test databases are restricted environments; schemas passwords are not published. The Staging database is not restricted; schema passwords are published.

Preventative Maintenance and System Upgrades

- The lengths of outages for non-routine maintenance are determined by the requirements of the maintenance procedure. Each outage will be planned and discussed at the weekly Hardware/Software Meeting held every Wednesday morning at 9 a.m. in the ITD Command Center Conference Room.
- All requests for software or hardware upgrades will be addressed in the Hardware/Software Meeting and must include a detailed plan.

Security

- Vendors will be required to:
 - Provide the ability for each user to be uniquely identified by ID
 - Provide basic authentication through use of passwords
 - Provide the ability to enforce password expiration
 - Provide the ability to require automatic password expirations when initially assigned or reset
 - Provide ability to configure password parameters such as password lengths, user access to expiration settings and other behaviors, enabling alphanumeric characters, etc.
 - Provide the ability to encrypt transmitted data and authentication information over internal and external networks
 - Provide support for Secure Socket Layer (SSL) 128 bit and 256 bit encryption
 - Provide a password database encrypted in storage.
 - Provide ability to protect audit logs from unauthorized access.
 - Provide ability to log activities performed by specific user ID and IP address and to date-time stamp all activities.
 - Provide ability to identify and log all subsequent access points to ensure accountability is maintained throughout session.
 - Provide ability to limit concurrent sessions.
 - Provide ability to log changes to administrative functions.
 - Provide ability to automatically archive audit logs.
 - Provide ability to set an unsuccessful access attempt limit and suspend IDs after reaching the unsuccessful access threshold.
 - Provide ability to send alerts to administrators for unauthorized access attempts.
 - Enable automatic logoff of ID after a defined period of session inactivity, and perform subsequent re-log-on password authentication.
 - Provide ability to lock out user or group ID by date or time.
 - Provide centralized administration, user authorization, registration and termination.
 - Data that is protected through encryption is an individual's Personally Identifiable Information (PII). Items that may be considered PII include, but are not limited to, a person's:
 - Full name (if not common)
 - Social Security Number or National identification number

- Telephone number
- Street address
- E-mail address
- IP address (in some cases)
- Vehicle license plate number
- Driver's license number
- Face, fingerprints, or handwriting
- Credit card numbers or credit card account information (billing address, account name, expiration date etc.)
- Bank Account Routing (RTN) and Account numbers
- Digital identity

Geographic Information System (GIS)

- **ArcGIS/CITRIX Applications**
 - Local application data that requires read/write access must be stored/and accessed from the centralized ITD CITRIX file shares. The application can't require the end user to write to the servers' hard drive.
 - End user application customizations must be stored in the end users profile under documents and settings.
 - Applications (including ArcGIS desktop extensions) must be compatible with 32bit as well as 64bit Windows Server operating systems.
 - Source code must be available.
- **ArcGIS Server/ArcIMS Web Applications**
 - Application must work with current version of ArcGIS Server/ArcIMS running in production servers or a newer planned upgrade version.
 - All applications should access data from ITD ArcSDE servers, and only specific datasets should be stored locally. A process should be implemented if data needs to be refreshed.
 - All errors should be written to a log folder in corresponding website directory created for each GIS application.
 - If application is found to contain errors that render it unusable or that present erroneous or misrepresented data, the GIS Web administrator will remove it immediately from production until such time as the application is fixed and tested successfully.
- **ArcGIS/ArcSDE Geodatabase Editing Applications**
 - All applications must work with the same version of the ArcGIS desktop suite that the County is using in its enterprise production environment or a newer planned upgrade version.
 - Editing applications should be integrated with Miami-Dade Editing Extension in order to leverage the County's geodatabase versioning mechanism. ITD will provide documentation and required technical support.
 - Editing applications should be deployed through CITRIX technology. If CITRIX is not a viable solution, the user department is responsible for the installation, maintenance and upgrade of software in users' workstations.
 - The GIS ArcSDE geodatabase being edited by the hosted editing application should be loaded in a development instance and fully tested prior to its production implementation. ITD GIS staff will be responsible for loading the data from the development instance to production. A copy of the ArcSDE enterprise architecture document will be provided before data loading.
- **Batch Server Jobs**
 - Batch jobs must work with current version of ArcGIS desktop/SDE suite running in production servers or a newer planned upgrade version.
 - All batch jobs must comply with the GIS standards for jobs development and ITD job naming conventions and scheduling procedures.
 - Any temporary data should be created in the designated batch job folder within the Scratch Area.

- All errors should be written to a log folder in corresponding job directory created for each batch processing job.
- All applications should access data from ITD ArcSDE servers, and only specific datasets should be stored locally. A process should be implemented if data needs to be refreshed.
- Jobs should be tested thoroughly in the development environment before a change management request is submitted to move job/job related components to the production batch processing servers.
- All changes to batch processing jobs in the production environment should be requested via change management procedures and should be implemented by the assigned GIS staff.