Schedule 2B

Midrange and Data Center Services

FOR

 Bluetit, Incorporated

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# 1.0 Midrange and Data Center Services Overview and Objectives

## 1.1 Midrange and Data Center Services Overview

Midrange and Data Center Management Services are the services and activities, as detailed in the following RFP, required to provide and support Bluetit’s midrange and data center environment which includes:

1. Bluetit hospital server rooms and CoLos
2. Bluetit’s regional practices containing supported equipment
3. Service provider provided managed tier 4 data center to house Bluetit owned servers and storage
4. Supported infrastructure systems, tools and equipment related to midrange technology including but not limited to application servers, SAN/NAS, media, wiring closets, telecommunication closets, racks network connectivity and components, middleware and infrastructure management software
5. Messaging technology environment including Microsoft Exchange and Autonomy/EAS archiving
6. Application hosting services including Microsoft Active Directory, Microsoft Identity Integration Server and Microsoft Operations Manager
7. Physical and logical database management system (“DBMS”) administration functions, including infrastructure administration, space and storage management, performance and tuning, capacity planning, backup and recovery, file structure management and monitoring, reporting, database middleware support, and DBMS technical support

## 1.2 Service Objectives

The following are the key high-level service objectives Bluetit expects to achieve through outsourced Midrange and Data Center Services and this RFP:

1. Provide a reliable, scalable, and secure computing infrastructure and supporting services to Bluetit
2. Minimize administrative effort by engaging the outsourcer to provide this management function
3. Acquire services with availability guarantees backed by Service-Level Requirements (SLRs)
4. Flexibility in deployment of computing resources to strategic objectives and initiatives
5. Automate server builds and software distribution

# 2.0 Service Environment

## 2.1 Scope of the infrastructure to be supported

The following sub-sections and related RFP appendices describe and scope the computing environment to be supported / complied with. Service environment appendices are to be maintained and reviewed with Bluetit by the service provider and made available to Bluetit on a quarterly basis.

### 2.1.1 Hardware and Software

1. A listing and description of all supported infrastructure hardware is provided in AppendixB.1
2. A listing and description of the supported application software and utilities is provided in Appendix B.1

### 2.1.2 Service Locations

1. A description and location of all Bluetit facilities and office locations requiring midrange and data center services is provided in Appendix B.3
2. A logical architecture of current data center facilities is provided in Appendix B.1
3. A logical architecture of physical network is provided in Appendix B.1

### 2.1.3 Personnel

a. Service provider will be responsible for providing appropriately skilled staffing to meet the Midrange and Data Center services roles and responsibilities and service levels set forth in the agreement

### 2.1.4 Policies, Procedures and Standards

a. A description of the Bluetit policies, procedures and standards with which midrange and data center services will comply is provided in Appendix B.5

### 2.1.5 Agreements and Licenses

a. A list of midrange and data center services related agreements and licenses will be made available if needed.

### 2.1.6 Work-In-Progress

a. The work in progress projects are termed as 'In-flight' projects” and are those described in Attachment – B.6. They will be managed in accordance with the change control procedures. Please note that some of these projects will be completed at the time the new contract will start.

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# 3.0 Midrange and Data Center Service Requirements

## 3.1 Service Requirements

Service provider is required to procure, design, build, systems monitoring, incident diagnostics, troubleshooting, resolution and escalation, security management, and capacity planning/analysis) as required to meet Bluetit Midrange and Data center service levels. Service provider is also required to build automation to help standardization in server builds.

In addition to the services described in this section for Midrange and Data Center services, service provider is responsible for providing the services described in the proposal request for IT service management services.

Service provider responsibilities include, but are not limited to:

1. Provide ad-hoc consulting services related to midrange technology
2. Provide architecture support and propose new hardware architectures, software products and configurations
3. Facilities management and procurement (Refer to Appendix B.5 for Bluetit Policies and Procedures)
	1. Provide facilities management for service provider's facilities and support Bluetit in managing Bluetit facilities containing supported equipment
	2. Procure and provide supported equipment and systems software necessary to operate Bluetit’s midrange technology environment
	3. Tracking maintenance agreements and related renewals for all supported hardware and software and related software licensing

iv. Provide any other equipment and software related to midrange technology at Bluetit’s request

1. Operations and Administration
	1. Provide operations management and change control management for all supported infrastructure systems
	2. Provide management for systems software and also ensuring software is maintained at vendor recommended and supported levels
	3. Perform all IMAC services (including labor) for all supported infrastructure systems in accordance with the systems change management procedures
	4. Provide server management for supported servers and also ensuring appropriate firmware and drivers are maintained as supported or vendor recommended levels
	5. Perform proactive monitoring of all supported infrastructure systems
	6. Perform production control and batch job schedule management for all supported infrastructure systems
	7. Provide maintenance for supported equipment
	8. Perform Level 1, Level 2 and Level 3 support for all supported infrastructure systems
	9. Perform print management services for all supported infrastructure systems
	10. Monitor performance and capacity of all supported infrastructure systems
	11. Support data interfaces for systems software and cooperate with Bluetit, or its designee, in the support of data interfaces for all other software.
2. Storage and Data Management
	1. Perform storage management for data
	2. Support SAN/NAS systems and devices
	3. Execute data backup and restore procedures
	4. Performance tuning, capacity management for storage devices
	5. Plan for storage refresh of aging equipment
3. Messaging
	1. Provide physical messaging and directory systems support for the Microsoft Exchange environment and disk space administration for all supported infrastructure systems
	2. Support and monitor the current messaging system archive (note Bluetit is in the process of identifying a replacement for the EAS/Autonomy email archive and the contract will require support in the migration to the new environment)
	3. Support and monitor instant messaging environments
	4. Support and monitor mobile messaging environments
4. Provide and support test and quality assurance environments and methods for all supported infrastructure systems
5. Provide web hosting services
6. Provide middleware administration and support
7. Provide physical and logical database management systems support, performance tuning, capacity management and disk space administration for all supported infrastructure systems
8. Provide electronic removable media operations for all supported infrastructure systems
9. Develop and maintain operations documentation with respect to all supported infrastructure systems related to midrange technology

## 3.2 Process Constraints

Service Provider will satisfy the following process specifications in its performance of the midrange and data center services:

1. Service Provider shall provide midrange services as more specifically detailed in the

Procedures Manual on a 24 hour a day, 7 day a week basis, except for scheduled downtime

1. Service Provider shall maintain reasonable currency of software and equipment responsible and shall make recommendations to Bluetit on maintaining reasonable currency of systems software and equipment for which Bluetit is financially responsible ensuring all software and firmware are maintained at vendor recommended and supported levels. For Bluetit policies, procedures and standards for software, refer to Appendix B.5.
2. Service Provider shall support all infrastructure-related activities pertaining to interfaces, data exchanges and data conversion environments in use by Bluetit or any end user
3. Service Provider shall be responsible for administration of Bluetit’s Remote Access services (e.g., file transfers, VPN access and RSA card access via third party support vendors) in use by Bluetit or any end user and will reasonably cooperate with entities approved by Bluetit to connect such entities to Bluetit’s networks or Equipment
4. Service Provider shall support Bluetit’s third party vendors’ access to the Bluetit environment as requested by Bluetit and in accordance with the Procedures Manual
5. Service Provider shall provide and use the appropriate resources, documentation, reports, infrastructure-related software, tools, procedures and management methodologies to administer, comprehensively manage, proactively monitor and reliably support Bluetit’s supported infrastructure systems and to resolve and correct performance degradations for all supported infrastructure systems problems in accordance with Service Provider’ responsibilities
6. Service Provider shall provide advice and recommendations regarding the selection and implementation of new technology, including security risks, in support of Bluetit’s changing business needs
7. Service Provider shall proactively monitor for and remediate Malware, recommend patches and solutions and update Malware protection software and data files as promptly as reasonably practicable following release by the Software manufacturer in accordance with the Procedures Manual
8. Service Provider shall coordinate maintenance activities with Bluetit to minimize impact on Bluetit and any end user when necessary maintenance must be performed
9. Service Provider shall, in the event of a disaster, restore Bluetit’s functionality in accordance with the disaster recovery plan
10. Bluetit shall have the right of prior written approval for all supported server architectural changes including movement to the LPAR environment
11. Service Provider shall comply with Bluetit’s security policies and procedures regarding security patches including the schedules required in such policies and procedures
12. All tape back-ups must be encrypted, subject to the encryption capability of the Bluetit equipment and software

## 3.3 Service Description and Roles and Responsibilities

In addition to the services, activities, and roles and responsibilities described in the section for IT service management service provider is responsible for the following:

### 3.3.1 General Responsibilities

The following table identifies general roles and responsibilities associated with this RFP. An “” is placed in the column under the Party that will be responsible for performing the task. Service provider responsibilities are indicated in the column labeled “Provider.”

##### Table 1 General Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| **General Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 1. Define Midrange and Data Center service requirements and policies |  |  |
| 2. Comply with Bluetit policies and standards and regulations applicable to Bluetit including information systems, personnel, physical and technical security |  |  |
| 3. Review and approve services and standards for supporting the Midrange and Data Center environment/Application platforms |  |  |
| 4. Manage event and workload processes across all platforms |  |  |
| 5. Provide technical support for all in-scope hardware/equipment of the Data Center computing infrastructure |  |  |
| 6. Support Data Center infrastructure System Software (e.g., operating systems, utilities, databases, Middleware as listed in the applicable RFP appendices) |  |  |
| 7. Provide and support in-scope Data Center networks and all related operations |  |  |
| 8. Provide and support Data Center-related environmental elements (e.g., HVAC, dual redundant UPS, power, cable plant, fire detection and suppression systems, temperature and humidity controls, and controlled physical access with 24×7 manned security) |  |  |
| 9. Conduct applications test-to-production migration |  |  |
| 10. Implement and coordinate all Changes to the in-scope Data Center infrastructure including those that may affect the Service levels of any other Service Tower and Third Parties |  |  |
| 11. Create, maintain and provide all appropriate project plans, project time and cost estimates, technical specifications, management documentation and management reporting in a form/format that is acceptable to Bluetit |  |  |
| 12. Provide and manage data center migration support as part of transition services |  |  |

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### 3.3.2 Operations and Administration

Operations and Administration Services are the activities associated with the day-to-day management of the Data Center computing environment, providing and supporting a stable infrastructure and effectively and efficiently performing operational and processing procedures to ensure services meet SLR targets and requirements. The following table identifies the Operations and Administration roles and responsibilities that service provider and Bluetit will perform.

##### Table 2 Operations and Administration Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| **Operations and Administration Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| **Monitoring Operations Roles and Responsibilities** |
| 1. Define monitoring requirements and policies – Should add one for Recommending monitoring requirements with Provider being responsible. |  |  |
| 2. Develop and document in the Standards and Procedures Manual monitoring procedures that meet requirements and adhere to defined policies |  |  |
| 3. Review and approve monitoring procedures |  |  |
| 4. Provide proactive and scheduled console monitoring of infrastructure and systems (e.g., hardware, network, batch schedule, interfaces, table spaces), respond to messages and take corrective action as required |  |  |
| 5. Develop and maintain standard automated scripts to perform monitoring on systems software |  |  |
| 6. Identify and report Incidents including system, file, disk and application Incidents |  |  |
| 7. Provide troubleshooting, repair and escalation of Incidents in the Data Center computing environment |  |  |
| 8. Provide preventative measures for proactive monitoring and self healing capabilities to limit outages that impact service delivery |  |  |
| 9. Identify and report application Incidents |  |  |
| 10. Resolve or assist in resolving application Incidents in accordance with SLRs and escalate as required |  |  |
| **Job Scheduling and Execution Operations Roles and Responsibilities** |
| 11. Define job scheduling requirements and policies, application interdependencies, Bluetit contacts, and rerun requirements for all production jobs |  |  |
| 12. Develop and document in the Standards and Procedures Manual job scheduling procedures that meet requirements and adhere to defined policies |  |  |
| 13. Review and approve monitoring procedures |  |  |
| 14. Provide job scheduling, job execution, reporting and Resolution, taking into account infrastructure and system interdependencies |  |  |
| 15. Implement and manage scheduling tools where necessary for managing/automating job execution (e.g., job workflow processes, interdependencies, Bluetit contacts, and rerun requirements file exchange functions and print management) |  |  |
| 16. Define production, test and demand batch scheduling requirements |  |  |

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| --- | --- | --- |
| **Operations and Administration Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 17. Prepare production, test and demand batch jobs for execution |  |  |
| 18. Execute production, test and demand batch jobs on required systems |  |  |
| 19. Monitor progress of scheduled jobs and identify and resolve issues in scheduling process |  |  |
| 20. Startup and shut-down online/interactive systems according to defined schedules or upon approved request |  |  |
| 21. Maintain database of job scheduling, contact, rerun and interdependencies |  |  |
| 22. Provide quality control for reprocessing activities, such as batch reruns |  |  |
| 23. Prepare job run parameters |  |  |
| 24. Validate job results per Bluetit instructions |  |  |
| 25. Notify Bluetit and maintain a history of job completion results |  |  |
| **System Administration Roles and Responsibilities** |
| 26. Define system administration requirements and policies |  |  |
| 27. Develop and document in the Standards and Procedures Manual procedures for performing system administration that meet requirements and adhere to defined policies |  |  |
| 28. Review and approve systems administration procedures |  |  |
| 29. Set up and manage end user and administrative accounts, perform access control, manage files and disk space and manage transaction definitions |  |  |
| 30. Perform daily operational tasks including but not limited to patching, anti-virus updates, system upgrade, software upgrades, software and hardware refresh, software distribution, provisioning, OS image build and administration. |  |  |
| 31. Perform system or component configuration Changes necessary to support computing services in conformance with Change Management requirements |  |  |
| 32. Perform all cross functional services as described in Schedule 2A |  |  |
| 33. Provide usage statistics reports that will be used to support chargeback and other reporting requirements |  |  |

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### 3.3.3 Storage and Data Management

Storage and Data Management Services are the activities associated with the provisioning and day-to-day management of the installed Data Center storage and data environment (e.g., direct access storage devices (DASD), storage area Network (SAN), Network-attached storage (NAS), tape and optical), providing a stable supporting infrastructure and effectively and efficiently performing procedures to ensure Services meet SLR targets and requirements. The following table identifies the Storage and Data Management roles and responsibilities that Provider and Bluetit will perform.

##### Table 3 Storage and Data Management Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| **Storage and Data Management Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 1. Recommend Provider-standard Storage and Data Management procedures |  |  |
| 2. Develop, document and maintain in the Standards and Procedures Manual Storage and Data Management Provider procedures that meet Bluetit requirements and adhere to Bluetit policies |  |  |
| 3. Review, provide additional procedures as required, and approve Storage and Data Management procedures |  |  |
| 4. Provide data storage services (e.g., SAN, NAS, tape, optical, etc.) |  |  |
| 5. Monitor and control storage performance according to technical Specifications, Storage and Data Management policies, and perform tuning as required |  |  |
| 6. Maintain and improve storage resource efficiency |  |  |
| 7. Maintain data set placement and manage data catalogs |  |  |
| 8. Create a monthly report that identifies files that have not be accessed for an extended period of time and recommend files to be migrated to lower cost storage media or deleted along with other effective storage space utilization recommendation |  |  |
| 9. Plan and executed for obsolescence of fully depreciated storage devices and the migration of data to new technology and removal of the old storage devices. |  |  |
| 10. Perform data and file backups and restores per established procedures and SLRs |  |  |
| 11. Manage file transfers and other data movement activities |  |  |
| 12. Provide input processing, for activities such as loading Third Party media (e.g., tape) and receipt and/or transmission of batch files |  |  |
| 13. Acquire and manage consumables, such as tape, disks, etc., in support of the backup requirements. Coordinate acquisition of additional materials as needed |  |  |

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| **Storage and Data Management Roles and Responsibilities** |  | **Service Provider** | **Bluetit** |
| **Media Operations Roles and Responsibilities** |  |  |
| 14. Recommend Provider-standard Media Operations procedures |  |  |  |
| 15. Develop, document and maintain in the Standards andProcedures Manual Media Operations Provider procedures that meet Bluetit requirements and adhere to Bluetit policies |  |  |  |
| 16. Review, provide additional procedures as required and approve media processing procedures |  |  |  |
| 17. Maintain a media library and media management system |  |  |  |
| 18. Manage the media inventory to ensure that adequate media resources are available. Coordinate acquisition of additional media as needed |  |  |  |
| 19. Manage input media availability to meet processing SLRs |  |  |  |
| 20. Load and manage Third Party media |  |  |  |
| 21. Provide secure off-site storage for designated media and transport media to and from Bluetit approved off-site location as required |  |  |  |
| 22. Perform periodic audits to ensure proper cataloging of media |  |  |  |

##### Table 4 Output Management

|  |  |  |
| --- | --- | --- |
| **Output Management Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 1. Define Output Management requirements and policies |  |  |
| 2. Develop and document in the Standards and Procedures Manual procedures for performing Output Management that meet requirements and conform to defined policies, including the management of transport, delivery locations and scheduling requirements |  |  |
| 3. Review and approve Output Management procedures |  |  |
| 4. Provide print Output Management and distribution |  |  |
| 5. Separate and organize printed output materials according to specifications provided by the ordering party |  |  |
| 6. Ensure that printed output is delivered to Bluetit-specified delivery locations according to schedule determined by Bluetit |  |  |
| 7. Package and coordinate designated output for pickup by USPS or private delivery services (e.g., FedEx, UPS) |  |  |

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| --- | --- | --- |
| **Output Management Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 8. Ensure that output devices are functioning, including performing or coordinating routine maintenance |  |  |
| 9. Define, maintain, and monitor MedConnect printing from the Cerner print distribution server to the local printer |  |  |
| 10. Create and distribute Bluetit data products for Bluetit customers, including volume creation (e.g., CDs, cartridges, FTP) |  |  |
| 11. Acquire and manage consumables, such as paper, print ribbons, ink, tapes, etc. Coordinate acquisition of additional materials as needed. |  |  |
| Cerner Output Management Services |
| 12. Laser Printer Setup - Setup printer based on ITSS engineering documentation (includes attaching printer to network and creating queue on print server) |  |  |
| 13. Laser Printer Setup - Update data collection workbook on MethodM. |  |  |
| 14. Laser Printer Setup - Create a CSV file with new build information which will consist of server information, created Bluetit name of printer, program name if applicable, and model of printer - Create eService ticket and attach CSV file - assign to Cerner Works. |  |  |
| 15. Laser Printer Setup - Create HPUX queue. |  |  |
| 16. Laser Printer Setup - Create chart print server queue |  |  |
| 17. Laser Printer Setup - Populate WTS location tool for new or swapped Citrix based devices. |  |  |
| 18. Laser Printer Setup - Create queue/output destination in device viewer - complete application setup |  |  |
| 19. Label printer setup - Setup printer based on ITSS engineering documentation (includes attaching printer to network and creating queue on print server) |  |  |
| 20. Label printer setup - Update data collection workbook on MethodM |  |  |
| 21. Label printer setup - Create a CSV file with new build information which will consist of server information, created Bluetit name of printer, program name if applicable, and model of printer - Create eService ticket and attach CSV file - assign to Cerner Works. |  |  |
| 22. Label printer setup - Create HPUX queue. |  |  |
| 23. Label printer setup - Send ITSS Cerner name, output destination of zebra and create barcode of each label printer. |  |  |
| 24. Label printer setup - Create queue/output destination in device viewer. |  |  |

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| --- | --- | --- |
| **Output Management Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 25. Label printer setup - Configure output destination viewer (X, Y, Prefix, Program) |  |  |
| 26. WTS Location - Add 'Net New' Citrix based device (PC, Laptop,Tablet) hostname, default location and default printer values to WTS location database - this will require access to both the location and device viewer Cerner tools. |  |  |
| 27. WTS Location - Change 'Existing' Citrix based device settings in WTS location database - this will be required when a device moves location or change to the default printer. |  |  |
| 28. WTS Location - Delete - Delete 'Existing' Citrix based device from WTS location database once removed from production |  |  |
| 29. Print Servers - Management of Windows print devices - adding and updating |  |  |
| 30. Troubleshoot print drivers issues (may require local resource) |  |  |
| 31. Print Servers - Management of Windows print queues |  |  |
| 32. Print Servers - Troubleshoot ticket opened by customer - may require local resource to resolve (Most print issues would not be Severity 1 or 2) |  |  |
| 33. Monitoring of Cerner print environment - monitor print server hardware and services, print queues on print server, chart servers, device viewer, chart requests, RRD fax request and OPS jobs. |  |  |

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### 3.3.4 Collaborative Computing

Collaborative Computing Services are the activities associated with the supporting collaborative tools (e.g., MS Exchange/Outlook). These activities include the acquisition, installation, upgrades, maintenance, support and tuning of collaborative applications for optimal performance and mailbox administration. The following table identifies the Collaborative Computing roles and responsibilities that Provider and Bluetit will perform.

###### Table 5 Collaborative Computing Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| **Collaborative Computing Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 1. Define Collaborative Computing requirements and policies |  |  |
| 2. Participate in defining and accept Collaborative Computing policies and procedures for functions including e-mail, calendaring and messaging delivery components |  |  |

|  |  |  |
| --- | --- | --- |
| **Collaborative Computing Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 3. Develop and document in the Standards and Procedures Manual Collaborative Computing procedures that meet requirements and adhere to defined policies |  |  |
| 4. Review and approve Collaborative Computing procedures |  |  |
| 5. Provide messaging system administration services including mailbox administration, add/move/delete, mailbox permissions, mailbox size management, mail archiving, and creation of distribution lists and owners. |  |  |
| 6. Provide public folder administration services, including creation/deletion of folders, folder owner permissions and ownership assignment, and folder replication management . |  |  |
| 7. Provide security services specific to collaboration systems (e.g., SPAM filtering, web filtering, malware detection and filtering ) |  |  |
| 8. Perform application upgrades (e.g., service packs, hot fixes, dot releases) |  |  |
| 9. Install, test, provide technical support, database administration and security administration for Collaborative Computing applications |  |  |
| 10. Provide technical assistance and subject matter expertise support as required by Bluetit staff and Third Party solution providers |  |  |
| 11. Provide and maintain e-mail archiving in accordance with Bluetit standards and policies and to meet regulatory and compliance requirements |  |  |
| 12. Provide and maintain e-mail archiving in accordance with Bluetit standards and policies and to meet regulatory and compliance requirements |  |  |
| 13. Provide and support messaging e-discovery for Legal and internal requests. |  |  |
| 14. Provide a facility to allow transmission of encrypted messages that integrates with the corporate archiving systems in support of any regulatory e-discovery requirements. |  |  |

|  |  |  |
| --- | --- | --- |
| **Collaborative Computing Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 15. Support, monitor and manage Bluetit’s mobile messaging services to in include but not limited to Blackberry, Apple IOS and Droid O/S environment and reporting requirements. Install, support and maintain all servers related to mobile messaging as described for messaging technologies. Install, support and maintain customized applications required by the business on the mobile platforms. Monitor the third party vendors’ warranties so that the mobile platform conforms to all messaging related regulatory requirements |  |  |
| 16. Support, monitor, and manage Bluetit’s instant messaging environments and reporting requirements to include Microsoft Lync/Communicator and CISCO Jaber. Install, support and maintain all servers related to instant messaging as described for messaging technologies. Install, support and maintain customized applications required by the business on the instant messaging platforms (i.e., persistent chat rooms). Monitor third party vendors’ warranties so that the instant message platform conforms to all messaging related regulatory requirements. |  |  |

###

### 3.3.5 Database Administration

Database Administration Services are the activities associated with the maintenance and support of existing and future databases. This includes responsibility for managing data, namely data set placement, database performance, and data recovery and integrity at a physical level. The following table identifies the Database Administration roles and responsibilities that Provider and Bluetit will perform. The outsourcing provided will provide both physical and logical database administration support. Physical includes responsibility for the database engine, configuration file(s), space, and other non-data related activities. Logical includes responsibility for the schema, SQL queries, fields, keys, etc. as well as performance and tuning at the index level.

###### Table 6 Database Administration Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| **Database Administration Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 1. Define Database administration requirements and policies including authorization requirements for End-Users, roles, schemas, etc., and approve Change requests |  |  |
| 2. Develop and document in the Standards and Procedures Manual Database Administration procedures that meet requirements and adhere to defined policies |  |  |

|  |  |  |
| --- | --- | --- |
| **Database Administration Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 3. Review and approve Database Administration procedures |  |  |
| 4. Provide security administration including managing role and End User database permissions in accordance with Bluetit policies |  |  |
| 5. Perform database restores and rollbacks from appropriate sources |  |  |
| 6. Create/refresh development/test/QA databases from production data as appropriate |  |  |
| 7. Execute authorized Service Requests |  |  |
| 8. Define and provide database creation, configuration, upgrade, patches and refresh requirements |  |  |
| 9. Execute database creation, configuration, upgrades, patches and refresh |  |  |
| 10. Execute all database system-level Changes (initialization parameters) |  |  |
| 11. Execute all schema Changes for all instances |  |  |
| 12. Define and provide database data definition requirements for applications (IMAC for tables, triggers, attributes, etc.) |  |  |
| 13. Execute database data definition requirements for applications (MAC for tables, triggers, attributes, etc.) |  |  |
| 14. Maintain documentation for all database instance parameters and system settings |  |  |
| 15. Maintain consistent database parameters and system settings across all like instances; consistency must be maintained according to established development to QA to production life cycle procedures. |  |  |
| 16. Define database definition and manipulation requirements for applications and developer schemas |  |  |
| 17. Execute database data definitions for applications and developer schemas |  |  |
| 18. Define and execute database performance and tuning scripts, and keep database running at optimal performance for Bluetit’s workload |  |  |
| 19. Implement and administer appropriate database management tools across all database instances. Performance metrics and historical data must be available for trending and reporting over a minimum of 6 months. The collection period begins once the provider takes over with tools provided by the provider. Related licenses are provided by the provider |  |  |
| 20. Identify locking conflicts, latch contention, rollback requirements, etc., for all database instances |  |  |

|  |  |  |
| --- | --- | --- |
| **Database Administration Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 21. Resolve locking conflicts, latch contention, rollback requirements, etc., for all database instances |  |  |
| 22. Review database instance performance at the index level and recommendations as to changes that may address performance issues |  |  |
| 23. Review database queries and make recommendations as to ways to improve performance |  |  |
| 24. Provide technical assistance and subject matter expertise toBluetit application developers and Third Party vendor support |  |  |
| 25. Provide data dictionary expertise, End-User data assistance, Data Warehouse Metadata definition, data mapping functions and creation of data cubes |  |  |
| 26. Monitor database and generate Help Desk Trouble Tickets for Problems, using automation where possible |  |  |
| 27. Open, track and manage to Resolution all database Problems |  |  |
| 28. Patch database Software as needed according to established development to QA to production life cycle |  |  |
| 29. Manage database communication Software configuration, installation and maintenance |  |  |
| 30. Provide database storage management |  |  |
| 31. Define database backup schedules, retention periods, levels (i.e., full, incremental or differential) |  |  |
| 32. Perform database backups allowing for both table and instance level restores |  |  |
| 33. Restore databases from backups and apply logs to bring database forward to the point in time approximately at point of failure |  |  |
| 34. Execute Bluetit’s database backup and recovery policies |  |  |

###

### 3.3.6 Middleware Administration

Middleware Administration Services are the activities associated with the maintenance and support of existing and future Middleware products. The following table identifies the Middleware Administration roles and responsibilities that Provider and Bluetit will perform.

###### Table 7 Middleware Administration Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| **Middleware Administration Roles and Responsibilities** | **Service Provider** | **Bluetit** |
| 1. Define Middleware requirements and policies |  |  |
| 2. Develop and document in the Standards and Procedures Manual Middleware Administration procedures that meet requirements and adhere to defined policies |  |  |
| 3. Review and approve Middleware Administration procedures |  |  |
| 4. Define authorization requirements for End-Users, roles, objects, etc., and approve Change requests |  |  |
| 5. Implement Middleware configurations |  |  |
| 6. Create, alter and delete application objects, following Change Management procedures |  |  |
| 7. Establish and maintain configuration and system parameters in a consistent manner across like server environments, per the requirements determined by Bluetit or other application development teams |  |  |
| 8. Execute processes for the proper maintenance and functioning of Middleware systems (e.g., load balancing, tuning, configuration management) |  |  |
| 9. Execute authorization Change requests |  |  |
| 10. Execute Middleware creation, upgrade and refresh |  |  |
| 11. Execute all Middleware system-level Changes (i.e., initialization parameters) – Can probably consolidate all these Change related items |  |  |
| 12. Execute all object Changes for all instances |  |  |
| 13. Maintain consistent Middleware parameters and system settings across all like instances according to established development to QA to production life cycle |  |  |
| 14. Implement and administer appropriate Middleware management tools across all Middleware instances |  |  |
| 15. Patch Middleware Software as needed, according to established development to QA to production life cycle. Correlate internal Change request to vendor tracking codes |  |  |
| 16. Provide Middleware communication Software configuration, installation and maintenance |  |  |

# 4.0 Service Management

## 4.1 Objective

A key objective of this outsourcing agreement is to attain service-level requirements (SLRs). Service provider shall provide written reports to Bluetit regarding Service provider’s compliance with the SLRs specified in this RFP Schedule.

## 4.2 Definitions

Appendix A (Definitions) provides a list of terms that apply to this RFP and following SLRs.

## 4.3 Service Level Requirements (SLRs)

The service provider must propose service levels to manage the service delivery for the Bluetit environment. Please indicate acceptance of each SLR listed below. In cases where TBD is identified, the service provider shall complete the appropriate value based on the service provider’s commercially available services. Include the transition period required to meet the service level and the service provider’s methodology to manage and improve service levels over the life of the contract.

#### Table 8 System Availability SLRs

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| --- |
| **Definitions** |
| System Availability is defined as the availability of in-scope infrastructure components required to conduct the normal business operation of Bluetit application systems including processors (e.g., mainframe CPU, memory, and storage), external storage, system Software and Network connection. Excludes scheduled maintenance.***Note: Service provider to propose SLR for System Availability.****Bluetit intends to have an SLR with the service provider to measure availability and performance from the user perspective and be related to the impact to the business.* |

|  |  |
| --- | --- |
| **System Availability Service-Level Requirements** |  |
| **System** | **Service Measure** | **Performance Target** | **SLR Performance %** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | Formula |  |  |
| Measurement Interval |  |  |
|  | Reporting Period |  |  |
| Measurement Tool |  |  |

#### Table 9 Application Platform Response Time SLRs

|  |
| --- |
| **Definitions** |
| Online response time for critical online applications including ERP, data warehouse, financial, HTTP, etc. |

|  |
| --- |
| **Application Platform Online Response Time Service-Level Requirements** |
| **Application Platform** | **Service Measure** | **Performance Target** | **SLR****Performance %** |
| Production Unix | Online Response Time | 90% of transactions complete ≤ 0.5 sec95% of transactions complete ≤ 1.0 sec100% of transactions complete ≤ 3.0 sec | 99.5% |
| UnixDevelopment,Test and QA | End-to-EndResponse Time | 90% of transactions complete ≤ 1.0 sec95% of transactions complete ≤ 1.5 sec100% of transactions complete ≤ 2.0 sec | 99.5% |
| Production Windows | Online Response Time | 90% of transactions complete ≤ 1.0 sec95% of transactions complete ≤ 1.5 sec100% of transactions complete ≤ 3.0 sec | 99.5% |
| WindowsDevelopment,Test and QA | End-to-EndResponse Time | 90% of transactions complete ≤ 1.0 sec95% of transactions complete ≤ 1.5 sec100% of transactions complete ≤ 3.0 sec | 99.5% |
| Intranet/Extranet Web Systems | End-to-EndResponse Time | 80% of transactions complete ≤ 1.5 sec95% of transactions complete ≤ 2.5 sec99.9% of transactions complete ≤ 3.5 sec | 99.9% |
| Internet Web Service | End-to-EndResponse Time | 50% of transactions complete ≤ 5.0 sec80% of transactions complete ≤ 30 sec99.9% of transactions complete ≤ 2 min | 99.9% |
|  | Formula | Performance = Transactions completed within Performance Target ÷ Total Transactions |
| MeasurementInterval | Measure at 30 minute intervals |
| Reporting Period  | Report Monthly |
| Measurement Tool | TBD |

#### Table 10 System Administration SLRs

|  |
| --- |
| **Definitions** |
| Actions by Provider for proactive monitoring and intervention to minimize capacity bottlenecks and activities required to implement system capacity and operational usage Change requests. |

|  |
| --- |
| **System Administration Service-Level Requirements** |
| **System****Administration Task** | **Service Measure** | **Performance Target** | **SLR****Performance****%** |
| Advise Bluetit of need to allocate additional processing resources based on pre-defined parameters and observed growth patterns | Proactive monitoring and reporting toBluetit of need to increase capacity | Sustained average daily CPU utilization approaches 70% of installed processor capacity—Inform Bluetit within 1Business Day | 99.0% |
| On-Demand CPUProcessing capabilityChange requests | Elapsed Time | Increases/decreases of ± 20% of baseline CPU processing capability within 2 days | 99.0% |
| Advise Bluetit of need to allocate additional storage resources based on pre-defined parameters and observed growth patterns | Proactive monitoring and reporting toBluetit of need to increase capacity | Total monthly storage capacity utilization measured in GBs used approaches 80% of installed capacity—Inform Bluetit within 1 Business Day | 99.0% |
| Setup/Modify End User ID orAuthorization changes. (NOTE: Password Resets areNOT included in thisSLR) | Response Time1–5 User IDs6–10 User IDs>10 User IDs | ≤ 2 Business Days ≤ 3 Business Days per agreed upon time | 95.0% |
| Deploy service/security patches/antivirus updates | Response Time | Same business day as signoff, subject to agreed-upon Change Management procedures | 99.0% |
| Capacity/PerformanceTrend Analysis and Reporting across all platforms | Monthly measurement/ analysis and periodic notification on resource utilization and trends for criticalsystem resources | Monthly analysis reportsInterim reports on rapidly developing events and trends identification. There should be one report per type of device reporting on peak and average usage. | 99.0% |
|  | Formula | Number of requests completed within PerformanceTarget ÷ Total of all requests occurring during Measurement Interval |
| MeasurementInterval | Measure Weekly |
| Reporting Period  | Report Monthly |
| Measurement Tool | TBD |

#### Table 11 Server Software Refresh SLRs

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| --- |
| **Definitions** |
| Software refresh for all upgrades and new releases. |

|  |  |
| --- | --- |
| **Server Software Refresh Service-Level Requirements** |  |
| **Server Software Refresh** | **Service Measure** | **Performance Target** | **SLR****Performance %** |
| Notification of vendor Software upgrades and new releases | Response Time | Within 30 days after Software vendor announcement | 95.0% |
| Implementation of service packs and updates to “dot” releases | Response Time | Within 60 days after approved by Bluetit | 95.0% |
| Implementation of version or major release updates | Response Time | Within 120 days after approved by Bluetit | 95.0% |
|  | Formula | Number of requests completed on time ÷ Total of all requests occurring during Measurement period |
| Measure Interval  | Measure Monthly |
| Reporting Period  | Report Monthly |
| Measurement Tool | TBD |

#### Table 12 System Refresh SLRs

|  |
| --- |
| **Definitions** |
| Software refresh for all upgrades and new releases. |

|  |
| --- |
| **System Refresh Service-Level Requirements** |
| **Updates/Refresh** | **Service Measure** | **Performance Target** | **SLR****Performance %** |
| Apply server and storagemicrocode/firmware at vendor recommended levels. | Elapsed Time  | Within in 90 days of release | 95.0% |
| Physical server and storage equipment refresh as identified in provider delivered capacity plan. | Elapsed Time | Completed within 90 days of delivery of hardware or within 2 days of the mutually agreed to install date. | 95.0% |
| Refresh for midrange servers (Windows/Unix) | Response Time | Population age greater than 3 years old based on business unit approval – This is written as hardware but the definition is for software. Software is covered under Server Software Refresh SLRs. | 95.0% |
|  | Formula | Total number of events completed within Performance Target ÷ Total number of events scheduled, due or required |
| MeasurementInterval | Measure Weekly |
| Reporting Period | Report Monthly |
|  | Measurement Tool | TBD |  |

**Table 13 Database Administration SLRs**

|  |
| --- |
| **Definitions** |
| Performance of all Database Administration tasks including, but not limited to, Software installation, patching, performance monitoring and tuning, instances creation and refresh, and recovery operations. For Service level measurement, production requests MUST be executed within the highest Service level. |

|  |  |
| --- | --- |
| **Database Administration Service Level Requirements** |  |
| **Administration Type** | **Service Measure** | **Performance Target** | **SLR****Performance %** |
| Instance Creation and Refresh | Elapsed Time | Create = 2 Business DaysRefresh = 1 Business Day | 95% |
| Create End-User ID,Grants, Revokes, Create table space, other data definition requests | Elapsed Time | 2 hours (1–5 requests daily)4 hours (6–10 requests daily) 2 Business Days >10 dailyBased on a per-database request | 95% |
| Schema changes and stored procedures – | Elapsed Time | 1 Business DayBased on a per-database request | 95% |
| Performance tuning and maintenance | Elapsed Time | Proactive monitoring and preemptive intervention to maintain requiredperformance levelsTwo hours to respond to ad hoc requests. | 95% |
| **Database Refresh Type** | **Service Measure** | **Performance Target** | **SLR****Performance %** |
| Individual patches and requisite patches per database | Elapsed Time | Same Business Day as signoff byBluetit, completed within AvailabilitySLRs | 95% |
| Service packs and updates to “dot” releases | Elapsed Time | Within 5 Business Days of signoff by Bluetit. Required downtime is outside of the normal Availability SLRs | 95% |
| Version or major release updates | Elapsed Time | Within 5 Business Days of signoff by Bluetit. Required downtime is outside of the normal Availability SLRs | 95% |
|  | Formula | Total number of events completed within Performance Target ÷ Total number of events scheduled, due or required |
| MeasurementInterval | Measure Weekly |
| Reporting Period  | Report Monthly |
| Measurement Tool | TBD |

**Table 14 Messaging SLRs**

|  |
| --- |
| **Definitions** |
| **Messaging Service-Level Requirements** |
| **Service Type** | **Service Measure** | **Performance Target** | **SLR****Performance****%** |
| MessagingAvailability, SMTP,Instant MessengerService, LotusNotes/Domino, MSExchange andBlackberry availability |  Availability | Sun.–Sat., 0000–2400 | 99.7% |
|  | Formula | # of hours of unscheduled downtime / (# of hours in a month – scheduled downtime) |
| MeasurementInterval | Monthly |
| Reporting Period  | Report Monthly |
| Measurement Tool | TBD |

#### Table 15 Output Delivery SLRs

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| --- |
| **Definitions** |
| Bluetit requires data output for a variety of output delivery formats and destinations, as well as processing requirements (includes remote printing and print to file). Confirmation of delivery and reporting of output volumes is required. Various Provider systems/servers direct output to remote printers and other enterprise systems (fax, pager, e-mail) at various locations, with output delivered to the appropriate system according to Bluetit-approved schedules and without errors. |
| **OUTPUT DELIVERY SLRs** |
| **Output Delivery Type** | **Service Measure** | **Performance Target** | **SLR****Performance****%** |
| Remote Output Delivery | Per Scheduled Time | per Bluetit-approved schedules | 98% |
|  | Formula | Number of jobs completed within Performance Target ÷ Total number of scheduled jobs |
| MeasurementInterval | Measure Weekly |
| Reporting Period  | Report Monthly |
| Measurement Tool | TBD |

#

# 5.0 Referenced RFP Appendices and RFP Schedules

**Table 16 Referenced RFP Appendices and RFP Schedules**

|  |  |
| --- | --- |
| **RFP Appendix** | **Description** |
| Appendix A | Definitions |
| Appendix B.1 | In-scope Hardware and Software |
| Appendix B.2 | Service Desk Metrics |
| Appendix B.3 | Location Information |
| Appendix B.4 | Telecom and VoIP |
| Appendix B.5 | Policies and Procedures |
| Appendix B.6 | In-scope Related Work in Progress |
| Appendix B.7 | Required Reports |
| **RFP Schedule** | **Description** |
| Schedule 1 | Relationship Management |
| Schedule 2A | Cross Functional Services (ITSM) |
| Schedule 2B | Midrange and Data Center Services |
| Schedule 2C | Data Network Services |
| Schedule 2D | Telecom and VoIP Services |
| Schedule 2E | Disaster Recovery and Business Continuity Services |
| Schedule 2F | End user Computing Services |
| Schedule 2G | Regional Practices Support Services |
| Schedule 2H | Security Services |
| Schedule 2I | PMO Services |
| Schedule 2J | Clinical Support Services |
| Schedule 3 | Reporting and Documentation |
| Schedule 4 | Fees and Pricing |
| Schedule 5 | Fee Reductions |