SECOND AMENDMENT TO AGREEMENT FOR

PROVISION OF MAINTENANCE AND SUPPORT SERVICES

BETWEEN

COUNTY OF ORANGE

AND

CERNER CORPORATION

JULY 1, 2017 THROUGH JUNE 30, 2022

THIS SECOND AMENDMENT TO AGREEMENT entered into this 19th day of November 2019, (effective date), is by and between the COUNTY OF ORANGE, a political subdivision of State of California (COUNTY) and CERNER CORPORATION, a Delaware For-Profit Corporation (CONTRACTOR). The Original Agreement and this first Amendment are and shall continue to be administered by the Director of the COUNTY's Health Care Agency or his/her authorized designee ("ADMINISTRATOR").

WITNESSETH:

WHEREAS, on the 1st day of July 2017, COUNTY and CONTRACTOR previously entered into that certain Agreement for the provision of Maintenance and Support Services for the period July 1, 2017 through June 30, 2020; and

WHEREAS, on July 31, 2018, COUNTY authorized an increase of the Agreement in the amount of $3,485,861 to the Agreement for the provision of Maintenance and Support Services for the period July 1, 2017 through June 30, 2020; and

WHEREAS, COUNTY desires to augment and renew the Agreement for the provision of Maintenance and Support Services for an additional two years, from July 1, 2020 through June 30, 2022, increasing Period One funding from $3,087,044.05 to $6,024,818.97, Period Two to $3,377,49.00, and Period Three to $3,478,003.94, for a revised maximum obligation of $12,880,572.28.

WHEREAS, COUNTY and CONTRACTOR have developed an Integrated Records Information System serving both HCA's Behavioral Health and Public Health Services divisions; and

WHEREAS, COUNTY and CONTRACTOR desire to augment the existing maintenance and support agreement by including additional and/or replacement server and network equipment and related software licenses that support the electronic health record system; and

WHEREAS, COUNTY and CONTRACTOR acknowledge the enhanced equipment and expansion of functional features will improve capabilities and result in significantly better performance allowing staff to be more productive; and

WHEREAS, COUNTY and CONTRACTOR agree to amend the Agreement for the provision of Maintenance and Support Services of the enterprise-wide Electronic Health Record System;

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NOW, THEREFORE, in consideration of the mutual covenants, benefits, and promises contained herein, COUNTY and CONTRACTOR do hereby agree as follows:

1. Page 6, lines 3 through 6 of the Agreement are hereby amended as follows:

    "**Term:** July 1, 2019 through June 30, 2022

    Period One Means the period from July 1, 2019 through June 30, 2020

    Period Two Means the period from July 1, 2020 through June 30, 2021

    Period Three Means the period from July 1, 2021 through June 30, 2022"

2. Page 6, lines 9 through 12 of the Agreement are hereby amended as follows:

"Period One Maximum Obligation:	$ 6,024,818.97
Period Two Maximum Obligation	3,377,749.00
Period Three Maximum Obligation:	3,478,003.94
TOTAL MAXIMUM OBLIGATION:	$12,880,572.28"

3. Paragraph V. Payments, subparagraph A. of Exhibit A to the Agreement is hereby amended as follows:

    "A. BASIS FOR REIMBURSEMENT – As compensation to CONTRACTOR for the Services described in this Exhibit A, and in Exhibits B and F of this Agreement, which amount shall be inclusive of applicable sales tax, COUNTY shall pay CONTRACTOR monthly in arrears; provided, however, that the total of such payments shall not exceed the COUNTY's Maximum Obligation per period. The actual monthly amount paid to CONTRACTOR shall be determined by the Equipment, Licensed Software, and Sublicensed Software inventories set forth in Exhibits B and F of this Agreement, which may be amended, in writing, by mutual agreement of the Parties.

    1. The Parties agree to pay CONTRACTOR as follows:

        a. Period One

            1) Licensed Software Support; $1,437,611.56. Of this funding, $146,244.96 is for any unanticipated maintenance and support service related needs not necessarily identified as Licensed Software Support items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

            2) Equipment Maintenance; $234,121.81. New equipment comes standard with either thirty six (36) or sixty (60) months of maintenance included and is invoiced at Second Amendment Effective date.

                a) Of this funding, $10,000 is for any unanticipated maintenance and support service related needs not necessarily identified as Equipment Maintenance items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be

Second Amendment
Cerner Corporation

2 of 106

MA-042-18010399

HCA ASR 19-000679

Page 2 of 106

enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

        b) Of this funding, $110,533.05 which is inclusive of tax and is an advance payment for the maintenance of equipment identified in Subparagraph I.E.2 of Exhibit F to the Agreement. The table Pre-Paid Equipment Maintenance Fee Schedule in Subparagraph I.E.2 of Exhibit F to the Agreement identifies the pre-paid maintenance term for each piece of equipment.

        3) Subscription Services; $67,439.88.

        4) Application Services Provider (ASP) $143,106.

        5) Shared Computing Services; $13,740.

        6) Managed Services $325,670.28.

        7) Application Management Services; $535,140.

        8) Transaction Services; $35,560.

        9) Sublicensed Software Maintenance; $717,327.88. Of this funding, $28,600 is for any unanticipated maintenance and support service related needs not necessarily identified as Sublicensed Software Maintenance items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

        10) Term Licensed Software and Support; $58,117.27.

        11) Equipment One-Time Fees; $682,998.39 which is inclusive of tax and is invoiced at Second Amendment Effective Date.

        12) Sublicensed Software One Time Fees; $202,565.73 which is inclusive of tax and is invoiced at Second Amendment Effective Date.

        13) Shared Computing Services One Time Fees; $7,500 which is invoiced at Second Amendment Effective Date.

        14) Professional Services; $1,563,920 which is inclusive of all travel and is invoiced as follows:

        a) $500,000 Fixed Fee Hours Pool invoiced at Second Amendment Effective Date.

        b) $545,000 Fee For Service hours which will be invoiced monthly in arrears after the services are delivered

        c) $24,000 for travel which is invoiced monthly in arrears after the travel has occurred

        d) $494,920 Fixed Fee milestone based services that are invoiced as follows:

           (1) 20%, or $98,984 that is invoiced at the Second Amendment Effective Date.

           (2) 30% or $148,476 that is invoiced at Project Kick-Off

           (3) 30% or $148,476 that is invoiced at completion of Build

           (4) 20% or $98,984 that is invoiced at First Productive Use- Go-Live

Second Amendment
Cerner Corporation
3 of 106
MA-042-18010399

HCA ASR 19-000679
Page 3 of 106

  b. Period Two

   1) Licensed Software Support; $1,375,896.75. Of this funding, $146,244.96 is for any unanticipated maintenance and support service related needs not necessarily identified as Licensed Software Support items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

   2) Equipment Maintenance; $68,710.48.. Of this funding, $10,000 is for any unanticipated maintenance and support service related needs not necessarily identified as Equipment Maintenance items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

   3) Subscription Services; $69,125.88.

   4) Application Services Provider (ASP) $155,226.00

   5) Shared Computing Services; $16,900.20.

   6) Managed Services $333,812.04

   7) Application Management Services; $548,518.50.

   8) Transaction Services; $36,424.00

   9) Sublicensed Software Maintenance; $713,565.16.. Of this funding, $28,600 is for any unanticipated maintenance and support service related needs not necessarily identified as Sublicensed Software Maintenance items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

   10) Term Licensed Software and Support; $59,570.38.

  c. Period Three

   1) Licensed Software Support; $1,406,638.04 Of this funding, $146,244.96 is for any unanticipated maintenance and support service related needs not necessarily identified as Licensed Software Support items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

   2) Equipment Maintenance; $88,956.64. Of this funding, $10,000 is for any unanticipated maintenance and support service related needs not necessarily identified as Equipment Maintenance items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

   3) Subscription Services; $70,854.02.

   4) Application Services Provider (ASP); $159,106.65.

   5) Shared Computing Services; $17,322.71.

Second Amendment
Cerner Corporation

MA-042-18010399

6)   Managed Services; $342,157.34

7)   Application Management Services; $562,231.46.

8)   Transaction Services; $37,309.60

9)   Sublicensed Software Maintenance; $732,367.84. Of this funding, $28,600 is for any unanticipated maintenance and support service related needs not necessarily identified as Sublicensed Software Maintenance items that may become necessary such as equipment, additional staff hours, and associated travel and lodging, which may be enacted through written, mutual agreement of the Parties in the form of a letter of concurrence or amendment to this Agreement.

10) Term Licensed Software and Support; $61,059.64.

2.   The above listed amounts and the inventories set forth in Exhibits B and F of the Agreement may be amended, in writing, by mutual agreement of the Parties as necessary throughout the term of the Agreement.

3.   The amounts referenced in Subparagraph V.A.1. above, shall be deemed payment in full for Support Services and Maintenance fees for all Equipment, Sublicensed Software, Licensed Software, Subscriptions, Term Licensed Software and Support, Shared Computing Services, Managed Services, Application Management Services, Application Service Providers, Transaction Services, and Professional Services purchased through CONTRACTOR and in First Productive Use as of the date of execution and/or amendment through the termination date, of the Agreement.

4.   Both parties agree that should COUNTY receive any computer software purchased from CONTRACTOR and/or CONTRACTOR's Subsidiaries electronically, these transactions are sales tax exempt under California Code Regulation 1502 (f) (1) (D).

5.   Term shall not begin for FHIR or EPCS monthly fees until Project Kickoff. COUNTY shall not be invoiced for these fees until thirty (30) calendar days after Project Kickoff.

B. PAYMENT METHOD

1.   CONTRACTOR shall submit a single invoice per month, in arrears, per category as follows: Licensed Software Support, Equipment Maintenance, Subscription Services, Application Services Provider (ASP) and Shared Computing Services, Managed Services, Application Management Services, Transaction Services (with the exception of any overage charges that may apply), Sublicensed Software Maintenance, and Term Licensed Software.

2.   COUNTY shall pay CONTRACTOR upon receipt of a properly completed invoice, in arrears, within thirty (30) calendar days following the end of each coverage month. CONTRACTOR'S billings shall be on a form approved or supplied by ADMINISTRATOR and provide such information as is required by ADMINISTRATOR.

C. All billings to COUNTY shall be supported, at CONTRACTOR'S facility, by source documentation including, but not limited to, ledgers, journals, time sheets, invoices, bank statement, canceled checks, receipts, receiving records, and records of service provided.

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Second Amendment
Cerner Corporation
HCA ASR 19-000679

5 of 106

MA-042-18010399
Page 5 of 106

D. ADMINISTRATOR may withhold or delay any payment due CONTRACTOR if CONTRACTOR fails to comply with any material provision of this Agreement; provided, however, CONTRACTOR has been given written notice of the alleged breach and has failed to cure the alleged breach within thirty (30) calendar days.

E. CONTRACTOR shall not claim reimbursement for services provided beyond the expiration and/or termination of the Agreement, except as may otherwise be provided under this Agreement.

F. CONTRACTOR shall be responsible for providing acceptable invoices to ADMINISTRATOR for payment and obtaining prior approvals as required herein. Incomplete or incorrect invoices shall be returned to CONTRACTOR for correction. Documentation, including but not limited to copies of receipts, shall be required by ADMINISTRATOR along with the supporting invoices.

G. COUNTY shall pay all Equipment, Licensed Software, Sublicensed Software and Support Services monthly Maintenance and Support fees for each prospective year, beginning July 1 of each year, in which the Agreement shall be in effect, after the parties review and mutually agree, in writing, on the Equipment, Licensed Software, Sublicensed Software and Support Services inventory for which Support and Maintenance will be provided in the next fiscal year, including the costs of said Support and Maintenance, from July 1 and extending through June 30. The Parties agree that costs associated with the purchase of additional equipment, licensed software, sublicensed and/or software Support Services, and corresponding maintenance, may be included in the inventory to be authorized and expended at sole discretion of ADMINISTRATOR, as referenced in Subparagraphs V.A.1.a.1., V.A.1.a.2., V.A.1.a.7., V.A.1.b.6., V.A.1.b.7.a., V.A.1.b.7.b., V.A.1.c.1., V.A.1.c.2., V.A.1.c.7., and V.A.2.

H. ADVANCE

1. COUNTY, at its sole discretion, has agreed to advance CONTRACTOR a sum not to exceed $1,063,920.00 for professional services and travel specified in section XII of this Exhibit A. At sole discretion of ADMINISTRATOR, advance payments for professional services and travel, until used, may be deducted from any payment to CONTRACTOR throughout the remaining term of this Agreement, or future agreements with CONTRACTOR, in an amount not to exceed the total of outstanding advances. In the event of early termination of this Agreement, the unpaid balance of the advance for professional services and travel shall be immediately due and payable to COUNTY by CONTRACTOR.

2. COUNTY has also agreed to prepay CONTRACTOR a sum of $110,533.05 for maintenance under this Agreement. The prepaid maintenance term shall commence upon Equipment shipment and extend past the expiration date of this Agreement as referenced in Exhibit F of this Agreement.

I. COUNTY acknowledges and agrees that CONTRACTOR may assign its interest in or otherwise grant a security interest in payments due pursuant to this Agreement in whole or in part to an assignee. COUNTY shall acknowledge every such assignment or granting of a security interest as shall be designated by written notice given by CONTRACTOR to COUNTY. CONTRACTOR will continue

Second Amendment
Cerner Corporation
6 of 106
MA-042-18010399
HCA ASR 19-000679
Page 6 of 106

to perform its obligations under this Agreement to COUNTY following such assignment or granting of a security interest."

4. Paragraph XII. System Migration Services is hereby added and inserted into Exhibit A of the Agreement as follows:

"I. <u>SYSTEM MIGRATION SERVICES</u>

A. CONTRACTOR and COUNTY agree that COUNTY shall pay for the migration of the Integrated Technology systems and this Scope of Work (SOW) covers only the items identified. A new agreement or amendment to this Agreement will be required if additional tasks beyond those outlined in this SOW are requested. If COUNTY is not able to complete any of the requirements or responsibilities that are outlined under the COUNTY Obligations in this SOW, then COUNTY may purchase additional professional service hours. The commitment for the completion and go-live of the Integrated Technology systems shall be no later than May 1, 2020.The target date set forth herein has been determined by the parties assuming a project start date of no later than November 1, 2019; CONTRACTOR shall not be liable for any project delay(s) unless such delay(s) is (are) due to CONTRACTOR's sole fault.

   B. IMPLEMENTATION SERVICES

      1. P2SENTINEL- SECURITY AS A SERVICE

         a. Application Services

            1) One non-production instance for County testing and training of the application services. The data retention period for the non-production instance is 60 days.

         b. Assumptions

            1) Application services fees do not include any County access devices (e.g. desktop workstation, thin client devices, or audit source systems).

            2) Application services fees do not include any County premise access to Internet (the method used to connect to the application services).

            3) All audit log data exceeding 5 years since original acquisition is subject to an automatic purge unless the data retention period is extended by County under separate agreement with Contractor.

            4) All audit log data will be from a *Cerner Millennium* system whose access log information needs to be audited by the application services, unless otherwise mutually agreed to by Contractor and County.

            5) County will be responsible for providing the final specifications for custom reports, subject to mutual agreement with Contractor. Updates or other changes to specifications of existing custom reports will be treated as a new custom report.

      2. NUANCE DRAGON DIRECT INSTALLATION SERVICES

Second Amendment
Cerner Corporation

7 of 106

MA-042-18010399

HCA ASR 19-000679

Page 7 of 106

a. Contractor Responsibilities

    1) Schedule and conduct pre-install review discussion with County

    2) Provide pre-install checklist document to County

    3) Conduct a discovery call to:

        a) Determine facilities, departments, or units that are included in scope

        b) Define roles and responsibilities

        c) Determine timelines for implementation and projected go-live date

        d) Confirm remote access requirements for the installation

        e) Review County workstation hardware to meet the minimum requirements of the solution

        f) Confirm pre-install requirements have been completed

    4) Install Nuance *Dragon* Medical One

    5) Install and configure up to 5 County workstations with Nuance *Dragon* Medical One

    6) Conduct post-install validation confirming:

        a) Sites, group structure created, and users assigned to groups

        b) Roles function as expected (administrator, account administrator, etc.)

        c) User profiles created and profile paths validated

        d) User licenses assigned

    7) Conduct technical training

        a) Conduct Nuance *Dragon* Help Desk Training off or on-site for up to 6 Client attendees

        b) Conduct Nuance *Dragon* Administrator Training for up to 6 Client attendees

        c) Provide a technical review of the Nuance *Dragon* solution, troubleshooting tips and tricks, escalation paths and responsibilities, and frequently asked questions

    8) Provide installation services for remotely hosted clients

b. County Responsibilities

    1) Install necessary software on Citrix servers unless remotely hosted

c. Deliverables

    1) Nuance *Dragon* Medical One installation

    2) Nuance *Dragon* Medical One technical architecture document provided

    3) Nuance *Dragon* Medical One validation performed

    4) Administrator training

    5) Help desk training

d. Assumptions

    1) Certain tasks are dependent on the availability of County technical personnel for verification and testing.

Second Amendment
Cerner Corporation

8 of 106

MA-042-18010399

HCA ASR 19-000679

Page 8 of 106

2) Contractor will identify those County tasks at the beginning of the project to facilitate scheduling and coordination.

3) County workstations meet minimum requirements

4) Technical support will be provided for 30 days post-go-live of first go-live event. After initial go-live event, support will transition to Contractor's Solution Works organization. Additional support for future go-live events may be contracted for as needed.

3. CONSULTING PROFESSIONAL SERVICES

a. Contractor responsibilities

Contractor will provide staff augmentation professional services for a System Engineer, Technical Engagement Leader, and Interface Architect

1) System Engineer

The system engineer is responsible for managing hardware and system software activities, including installation and capacity management.

a) Assist with software and system install.

b) Assist county with issue resolution.

c) Manage equipment installation activities at County's facility in conjunction with County's team member.

d) Understand and coordinate the installation of third-party software and hardware

2) Interface Architect

The interface architect is responsible for working with County, County's other suppliers and Contractor to ensure effective and efficient integration across County systems and devices. Leverage Contractor's organizational knowledge of medical systems and devices to develop a thorough understanding of County workflows, goals and architecture

3) Technical Engagement Leader

The technical engagement leader is responsible for the definition and delivery of technical installation work during the implementation effort.

a) Serves as primary contact for technical issues and provides consultation on technical risk factors that must be addressed to achieve a successful implementation and ensure on-going availability of systems.

4. WEBSPHERE APPLICATION SERVER INSTALLATION

a. Description

1) IBM WebSphere® Application Server (WAS) is the implementation by IBM of the Java 2 Enterprise Edition (J2EE) platform which provides centrally managed environment for Contractor's Java enterprise edition (EE) applications. WAS provides virtualization, dynamic operations, health and service level management, and application edition management

2) Contractor's extensions to WAS provide the following benefits:

a) Enables Cerner Java EE applications co-existence on the same device,

Second Amendment
Cerner Corporation
9 of 106
MA-042-18010399

HCA ASR 19-000679
Page 9 of 106

eliminating the need for multiple WAS cells and allowing multiple applications to be deployed to the same application servers

   b) Provides standard mechanisms for management and monitoring of Contractor Java EE applications and external communication

   c) Automates the initial and subsequent deployments by Install Solutions with the creation of an enterprise appliance (EA) role in Contractor Deployment Manager (DM)

   d) Uses WebSphere Virtual Enterprise (WVE) to:

    (1) Facilitate rolling upgrades; new editions of an application can be installed now and rolled out later without downtime

    (2) Facilitate application rollback if an edition should need to be backed out

    (3) Provides an on demand router (ODR), which is an intelligent Hypertext Transfer Protocol (HTTP) and Session Initiation Protocol (SIP) proxy server that provides advanced capabilities in routing requests and facilitating updates

  b. Project Planning and Leadership

   1) Contractor will oversee planning, execution, and communication relative to WAS implementation services including:

    a) Communicating with County about the team of consultants involved with the project

    b) Scheduling and conducting follow up review discussion with County technical teams

    c) Ensuring technology services are delivered consistently and according to recommendations

  c. Deliverables

   1) IBM WAS solution installed and configured as set forth in this Scope

   2) Knowledge transfer for application installation, configuration, and operational procedures

   3) Documentation for installation, configuration, and operational procedures

   4) This project will be considered complete one week after EA has been set up

  d. Pre-Requisites

   1) Creation of servers for WAS installation

   2) Configuration of Windows / Red Hat Enterprise Linux (RHEL) settings to Contractor standards

   3) Creation of a domain service account for WAS functionality

   4) Installation of *Cerner Millennium* 2012.01 or greater

  e. County Responsibilities

   1) Providing access to WAS installation media

   2) Providing access to WAS servers

Second Amendment
Cerner Corporation
10 of 106
MA-042-18010399
HCA ASR 19-000679
Page 10 of 106

3) Configuring reboot schedules

4) Configuring load balancer

f. Contractor Responsibilities

1) Verifying server hardware

2) Assisting in making the hardware available on *IntelliNet* for remote support from Contractor

3) Assisting with high availability/failover configuration

4) Installing IBM WAS

5) Installing required and recommended fixes for IBM WAS

6) Installing the IBM WebSphere Deployment Manager service for remote management (1 per cell)

7) Installing the IBM ODR integrated on the WAS servers

8) Installing Contractor EA portlet and security service portlet

9) Assisting with Contractor DM and Contractor EA

10) Creating 1 production and 1 non-production cell

11) Configuring application servers associated with production and non-production cells to Contractor standards

12) Installing the cluster template

13) Assisting with infrastructure functionality testing

g. Assumptions

1) This Scope consists of deployment of the WAS platform. Installation and configuration of Contractor's WAS applications are not included

2) Virtual or physical servers will be available and the WAS administrator account will be an administrator on servers as part of project kick off

3) All work will be performed remotely unless otherwise noted or agreed upon. On-site work may extend project duration and cost

4) WAS installation media will be available as part of kick off

h. Estimated Duration

1) One to 2 weeks

2) This time frame is dependent on the number of cells to be set up, availability of Contractor's technical personnel for verification, testing and knowledge transfer, and any other unforeseen factors

5. CONTENT360 DOCUMENT IMAGING UPGRADE SERVICES

The *Content360* Document Imaging upgrade project is a services arrangement intended to assist County with upgrading theContent360 Document Imaging solution to the latest supported Content360 application software versions compatible with County's environment. The upgrade project is intended to upgrade County's current Document Imaging application functionality on a like-for-like

Second Amendment
Cerner Corporation
HCA ASR 19-000679

11 of 106

MA-042-18010399
Page 11 of 106

1 basis between versions. It is not within the scope of this project to modify or build new application

2 functionality unless required for solution passivity.

3   a. Overview

4   1) Upgrade Document Imaging components to the latest certified and compatible

5 software versions in 1production and 1non-production environment

6   2) Where current production licensing exists, components covered in the Document

7 Imaging upgrade include:

8   a) EMC ApplicationXtender (County and database)

9   b) EMC DiskXtender

10   c) EMC ApplicationXtender report manager

11   d) EMC ApplicationXtender web services

12   e) Kofax capture (server(s) and Countys)

13   f) Kofax capture network server

14   b. Facilities

15   1) Scope assumes 1 centralized data capture center

16   c. Testing

17   1) Contractor is responsible for high-level functional testing of the upgraded

18 environment

19   2) County is responsible for detailed testing of all functionality

20   d. Deliverables

21   1) Content360 CPDI upgrade installed and configured as outlined in this Scope

22   2) Knowledge transfer of installation, configuration, and operational procedures for

23 maintenance purposes

24   e. Assumptions

25   1) Appropriate hardware and licensing is in place and County is current on

26 Maintenance payments

27   2) This Scope does not include services for Cerner Millennium release upgrades or

28 activities

29   3) County must provide administrative access to all Content360 servers affected

30 during the release upgrade via an Intellinet connection

31   f. Estimated Project Duration

32   1) Application and project management duration will be the length of the project,

33 estimated to be approximately 3 months

34   2) Project management support will not exceed 14 weeks in total duration

35   3) The Content360 upgrade includes onsite services for:

36   a) Up to 1 planning trip for discovery, current state documentation, and technical

37 planning

b) Up to 1 test upgrade trip in 1 non-production and 1 production environment

g. Technical Work Effort

1) The Document Imaging upgrade is composed of technical events

a) Contractor will complete the majority of the technical activities set forth in the work effort below

(1) Work effort reflects tasks included in the Content360 Document Imaging upgrade and the applicable responsible party

(2) County will be required to engage in certain events or tasks that are specific to County's domain or environment

Content360 Document Imaging Technical Services (P = Primary, R = Review, A = Assist)	Contractor Resource	County Resource
Document the current state of Document Imaging architecture and utilized functionality	P	A/R
Identify and mitigate risks	P	A/R
Document the future state of Document Imaging architecture	P	A/R
Create technical project plan and determine domain strategy	P	A/R
Manage technical activities related to the Document Imaging upgrade and escalation activities	P	A/R
Prepare environment for release, run *Cerner Millennium* support assistant, submit updates, and review County custom warehouse, scripts, and indexes	A	P
Upgrade front-end devices in the production domain (Citrix, scan stations, view stations, charting servers, etc.)	A	P
Develop test scripts	R	P
Perform integration/functional test scripts	R	P
Support production upgrade to new release	P	A
Collaboratively work with County to define database build and testing requirements	P	R
Determine and document initial package requirements; identify and resolve potential stray code that County has installed	P	A/R
Install package requirements	A	P
Provide 48 hours of on-site post-upgrade support	P	A

6. CAREAWARE MULTIMEDIA-HIGHLY AVAILABLE-MIGRATION

a. Service Description

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Second Amendment
Cerner Corporation

13 of 106

MA-042-18010399

HCA ASR 19-000679

Page 13 of 106

1) Contractor will provide Services for configuring and training for building a new *CareAware MultiMedia* Archive in a highly available cluster on the latest release of *CareAware MultiMedia*, to facilitate the migration from the existing release of *CareAware MultiMedia* to *CareAware MultiMedia* release 6.3.

    b.   Prerequisites

1) Unless the Equipment and Sublicensed Software is set forth in the "Solutions and Services" section of this Scope, County is responsible for setup of any equipment not purchased through Contractor. If equipment is not purchased through Contractor, County is responsible to meet the specifications as outlined in the Contractor Clinical Imaging – Supported and Planned Technology Guide. Contractor's technology architect will coordinate the validation of the existing County environment and planned technology.

2) County's *CareAware MultiMedia* Archive must be on version 6.2 or higher currently.

    c.   Configuration

1) Cerner will provide the following services

    a) Initial configuration of a two-node *CareAware MultiMedia* highly available cluster at one location for one domain on the latest release of *CareAware Multimedia* 6.3.

2) Contractor will provide setup and testing of the high availability software on the new *CareAware Multimedia* 6.3.

3) Contractor will provide assistance with migrating the ICACHE data from the existing *CareAware Multimedia* gateway environment to the new *CareAware MultiMedia* environment.

4) Contractor will provide assistance with migrating the existing Oracle database from the existing *CareAware MultiMedia* environment to the new *CareAware MultiMedia* environment as well as upgrading the Oracle database from Oracle 10.2 to Oracle 11.2.

    d.   Training

1) Contractor will provide a 1 day on-site training event for the system administrator.

    e.   Conversion Support

1) This Scope includes 12 hours of go-live support.

    f.   Assumptions

1) The image backup strategy is not included in this Scope and will be supplied by County or contracted separately.

2) This Scope does not include the implementation and configuration of front-end applications or acquisition devices

   7.   NUANCE COMMUNICATIONS INC. SCOPE OF WORK

    a.   Supplier Responsibilities

1) County Success Management Services include:

    a) Assigned County Success Manager (CSM)

Second Amendment
Cerner Corporation

14 of 106

MA-042-18010399

HCA ASR 19-000679

Page 14 of 106

b) Success Planning – Identify County desired business and clinical outcomes; build County success roadmap; establish clear success criteria as measured by quantitative Key Performance Indicators

c) Outcome Monitoring and Management – Continuous license utilization, clinician adoption, and clinician efficiency monitoring; usage and behavioral pattern analytics; proactive communication, intervention, and course correction to ensure County success; regular business reviews

d) Return on Investment (ROI) Optimization – Business and clinical outcomes tracking and management; leveraging best practices for ROI maximization

e) Consulting – As-needed services around industry trends, benchmarking, and opportunities to drive additional value

8. P2SENTINEL ACCELERATOR

    a. Overview

       1) The P2Sentinel Accelerator engagement will equip County's information technology (IT) staff and security officer with best practice recommendation and configuration to utilize the powerful auditing capabilities within P2Sentinel.

       2) Workshop Objectives:

          a) Provide education on solution capabilities

          b) Describe and demonstrate best practice recommendations

          c) Review and explore reporting enhancement needs and additional audit sources

          d) Assist in developing an action plan

    b. Duration

       1) 4 week

       2) 1 on-site visit (1 to 2 days) for 1 facility (workshop and Post Event Health Check)

       3) Weekly one-hour calls

    c. Assessment Process

       1) Preparation – Kick-off call review (agenda, attendees, objectives)

       2) On-site visit – Current state analysis, demonstration of capabilities, report interpretation, and best practice usage workshop

       3) Follow up - Deliver action plan, make strategic recommendations on any gaps and/or risks identified, monitor usage, and answer questions

    d. Supporting Collateral

       1) P2Sentinel event guide

       2) Review of supporting resources

       3) Action plan

    e. Assumptions

       1) Either Cerner or Client may designate a new representative by written notice to the other

2) The appropriate level of access will be granted to allow the Cerner consultants to adequately assess design, build, and workflow

3) This Scope does not include the Services to implement the improvements identified as a part of the assessment process

4) Client will provide knowledgeable individuals in the areas outlined to be assessed in this Scope. These individuals should be able to exhibit knowledge about current workflow practices and database build

5) Minimum of 4 weeks required from date agreement is signed to prepare for on-site week

6) Modifications to the assumptions or items presented in this Scope will constitute a change in professional services and fees

 f. P2Sentinel Accelerator

(P = Primary, R = Review, A = Assist)	Contractor Resource	County Resource
Lead kick-off call	P	A
Create agenda for on-site visits	P	R
Align resources for on-site visits	A	P
Conduct on-site visit	P	A
Provide detailed action plan	P	R
Perform Health Check	P	R
Lead post-visit calls to review report and progress	P	A
Complete Data Collection Workbook	A	P

9. CITRIX INSTALL

Citrix XenApp is an application virtualization product that allows users to connect to their corporate applications from a wide range of computer systems and mobile devices. XenApp can host applications on central servers and allow users to interact with them remotely or stream and deliver them to user devices for local execution. Cerner utilizes the Citrix XenApp platform to allow clients access to the *Cerner Millennium* front-end components and tools.

This service will perform the base installation and configuration of a new Citrix farm on up to 5 Windows based Intel x86 Citrix servers including the creation of a Citrix license server, data store and Citrix application servers.

 a. Overview

1) Provide project planning, leadership, and settings knowledge transfer

2) Provide recommendation and documentation of the operating system (OS) installation pre-requisites including:

Second Amendment
Cerner Corporation

16 of 106

MA-042-18010399

HCA ASR 19-000679

Page 16 of 106

               a) Discussing Windows Terminal Services design and Citrix client strategy

               b) Validating planned OS version and licensing and license server requirements

               c) Identifying disk storage space, new file system layout and sizing requirements

               d) Reviewing Cerner application compatibility requirements

        3) Validate software media and licensing availability

               a) Installation of appropriate version of Microsoft Windows OS with terminal services and Contractor recommended OS patches

        4) Load and confirm storage drivers and storage accessibility for storage array or storage area network (SAN) attached storage

        5) Install Citrix server components:

           a) Windows Terminal Services

               (1) Drive configuration

               (2) User and group discussion

               (3) Application compatibility and coexistence

               (4) Printer configuration strategy

               (5) Terminal services (TS) license server requirements

        6) License server configuration

           a) Installation of license server (add and activate licenses)

           b) Installation of SQL server, SQL database, data store, and configuration

        7) Citrix application server

           a) Installation of Cerner recommended Citrix hotfixes/patches

           b) Network configuration and account authority issues

           c) Determining Citrix administrator accounts

           d) Farm configuration and naming conventions

        8) Citrix Web interface

           a) Define rules and assign evaluators configure with servers

           b) Test load balancing configuration

     b. Configuration

        1) Configure server security

           a) Identify new technology file system (NTFS) rights

           b) Create and validate group and local policy and profile implementation and configure user rights

           c) Configure Remote Desktop Protocol (RDP) and Independent Computing Architecture (ICA) connections

        2) Install universal printer drivers

        3) Install *Cerner Millennium* on Citrix servers from current warehouse

        4) Configure *Cerner Millennium* Citrix environment for multi-user environment

Second Amendment
Cerner Corporation
17 of 106
MA-042-18010399

HCA ASR 19-000679
Page 17 of 106

5) Publish *Cerner Millennium* applications

6) Verify application launch

7) Configure and test *Cerner Multum* connectivity (if applicable)

8) Configure and test bar code scanning (if applicable)

9) Configure WTSLocation toolkit on new Citrix farm (if WTSLocation implemented in environment)

10) Use commercially reasonable efforts to deliver, as applicable, the documentation, drawings, and environmental specifications in a format or containing content reasonably conforming to Client's documentation standards for like documents. When there are multiple occurrences of the same service, Cerner's work effort and deliverables shall be adjusted to take into account the then current technical environment including updated maintenance and management checklists

    c. Deliverables

        1) Configure server security

            a) Identify new technology file system (NTFS) rights

            b) Create and validate group and local policy and profile implementation and configure user rights

            c) Configure Remote Desktop Protocol (RDP) and Independent Computing Architecture (ICA) connections

        2) Install universal printer drivers

        3) Install *Cerner Millennium* on Citrix servers from current warehouse

        4) Configure *Cerner Millennium* Citrix environment for multi-user environment

        5) Publish *Cerner Millennium* applications

        6) Verify application launch

        7) Configure and test *Cerner Multum* connectivity (if applicable)

        8) Configure and test bar code scanning (if applicable)

        9) Configure WTSLocation toolkit on new Citrix farm (if WTSLocation implemented in environment)

        10) Use commercially reasonable efforts to deliver, as applicable, the documentation, drawings, and environmental specifications in a format or containing content reasonably conforming to County's documentation standards for like documents. When there are multiple occurrences of the same service, Contractor's work effort and deliverables shall be adjusted to take into account the then current technical environment including updated maintenance and management checklists

    d. Deliverables

        1) Project documentation, including but not limited to:

            a) Pre-installation documents

            b) Citrix installation and configuration guide

            c) Thin client implementation documentation

Second Amendment
Cerner Corporation
18 of 106
MA-042-18010399
HCA ASR 19-000679
Page 18 of 106

d)   Production environment change authorization (PECA) forms requiring Client signature. These forms will be presented to Client describing access requirements and items being reviewed on Client's production environment prior to work being performed

e)   Event Activity Report (EAR) forms requiring Client signature upon completion of designated solution implementation

f)   Pre-travel checklist as required

2)   Installation of the Citrix software and related components

3)   Storage network driver installation as required

4)   Basic system network configuration

5)   Operational knowledge transfer

e.   Pre-Requisites

1)   All servers to be reviewed identified

2)   Existing domain structure (Windows Server 2008 Active Directory, Windows Server 2003 Active Directory) reviewed

3)   *Cerner Millennium* domain is operational

4)   Administrative access to target nodes granted

5)   Required licenses and software necessary are present

6)   Appropriate network connectivity available

7)   All required disk space available

8)   Existing network layout reviewed

9)   Network access provided (remote access server (RAS), internet, local area network (LAN), wide area network (WAN), wireless)

10)   Pre-travel checklist reviewed with Client

f.   Project Planning and Leadership

1)   Contractor will oversee planning, execution, and communication relative to database assessment services including:

a)   Communicating with County about the team of consultants involved with the project

b)   Scheduling and conducting follow up review discussion with County technical teams

c)   Ensuring County has access to all required service packages as needed

d)   Ensuring technology services are delivered consistently and according to Contractor recommendations

e)   Creating and driving deliverables through Contractor's *MethodM*

g.   Knowledge Transfer

1)   Solution specific knowledge transfer or training will include:

//

a) Contractor host and OS technology roadmap, recommended OS and Citrix patching strategy

b) Navigating Contractor support and technology pages

c) *Cerner Millennium* code dependencies

d) Technology upgrades, planning, execution, and support

e) Current configuration review

(1) Terminal server system administration

(2) Determine server backup and restore techniques and system recovery/replacement

(3) Performance and load monitoring and management

(4) User and group maintenance

2) County and software distribution strategies and published application management In addition to the structured knowledge transfer planned, Contractor anticipates numerous knowledge transfer opportunities during the implementation phase. On-site visits may be planned in advance and County will be encouraged to shadow Contractor consultants to maximize knowledge transfer opportunities. Additional training beyond this knowledge transfer may be required and is the responsibility of the County to obtain

h. Post Implementation Support

1) Contractor will provide remote project support on an as needed basis up to 2 weeks days post implementation

a) After the post implementation support, all future support will be available to County through Contractor's Immediate Response Center (IRC) for critical production related issues or the Immediate Answer Center (IAC) for general non-urgent support

(1) During the post implementation period Cerner will assist Client with system support and tuning as needed

i. Client Obligations

1) County is responsible for the following tasks as related to this Scope:

a) Ensuring host definitions have been generated and are available for connection

b) Providing Contractor administrative access to the systems being serviced as needed

c) Designating a representative to serve as County project manager to act as the focal point for Contractor relative to this project and will have the authority to act on County's behalf in matters regarding this project

d) Providing documentation of requested configurations on an as needed basis

e) Providing documentation and support phone numbers for all hardware and software providers

f) Performing any necessary County operational testing

Second Amendment
Cerner Corporation

20 of 106

MA-042-18010399

HCA ASR 19-000679

Page 20 of 106

g) Providing County resources for any knowledge transfer made available as part of this implementation

2) County agrees that Contractor will bypass the verification processes, if connections cannot be verified due to incompatible architecture, hardware connectivity incompatibilities, and wrong software levels, etc. (i.e. unsupported or bad cabling, third party unreliable equipment, unsupported network interface cards)

3) The following activities are not included in this Scope and will not be implemented:

a) Hardware installation including physical installation of hardware, including cabling, hardware partitioning, and software virtualization, power, I/O card placement

b) System firmware review and upgrade

c) Installation of virtual machine (VM) guest OS if virtualization is used

d) Installation of additional layered products such as *Cerner Millennium* or other Contractor supported solutions

e) Network Time Protocol (NTP) server creation or configuration

f) OS level user account creation

g) Configuration, connection, or cable storage

h) Validation or upgrade of firmware levels for attached SAN or network related hardware components including, but not limited to, SAN array microcode, fibre channel switch microcode and software, and network switch microcode and software

i) Storage implementation, logical unit number (LUN) creation, zoning, connectivity and cabling

j) Creation of required disk space and file systems beyond requirements of operating system installation

k) Domain name server (DNS) reconfiguration

l) All network, network switches, Internet Protocol (IP) addresses, and all wiring to connect new hosts to County network

j. Assumptions

1) County is familiar with the core technologies used in this solution

2) Contractor has remote access to County nodes

3) All prerequisite work related to the delivery of this solution is complete

4) All work will be delivered remotely outside the planned and agreed upon site visits

5) Contractor will have required access to the systems where work is to be performed

a) This may include privileged accounts and possible physical access as needed

k. Duration and Work Effort

1) Estimated project duration is 2 weeks depending on County availability and system connectivity

Second Amendment
Cerner Corporation

21 of 106

MA-042-18010399

HCA ASR 19-000679

Page 21 of 106

2) Typical on-site work requires 1 site visit. The specific requirements of this project may determine additional site visits. These site visits will be coordinated and agreed on by County

10. CITRIX WEB INTERFACE SECURE GATEWAY INITIAL PHASE

The Citrix Secure Gateway for Windows helps the County secure access to enterprise network computers running Citrix XenApp and provides a secure internet gateway between Citrix XenApp and user devices. The Secure Gateway transparently encrypts and authenticates all user connections to help protect against data tampering and theft. All data traversing the internet between a remote workstation and the Secure Gateway is encrypted using the secure sockets layer (SSL) or transport layer security (TLS) protocol.

The Secure Gateway is an application that runs as a service on a server that is deployed in the demilitarized zone (DMZ). The server running the Secure Gateway represents a single point of access to the secure, enterprise network. It also acts as an intermediary for every connection request originating from the Internet to the enterprise network. For increased security, the Secure Gateway proxy is used with the Secure Gateway in a double-hop DMZ deployment. It is installed in the first DMZ, and the Secure Gateway proxy is installed in the second DMZ. The Secure Gateway proxy acts as a conduit for traffic originating from the Secure Gateway to servers in the secure network, and from servers in the secure network to the Secure Gateway.

a. Initial Phase

1) Hardware and software system requirements identified

2) Planning - Review existing network layout

a) Network addresses (publicly accessible internet protocol), fully qualified domain name (FQDN), DMZ, firewall

b) Citrix recommends that County configure firewalls to restrict access to specific transmission control protocol (TCP) ports only. If County configures firewalls to allow access to TCP ports other than those used for hypertext transfer protocol (HTTP), independent computing architecture (ICA), secure sockets layer (SSL), and extensible markup language (XML) data, County may allow users to gain access to unauthorized ports on the server

b. Implementation

The web interface provides users with internal access to Citrix applications and content and virtual desktops. Users access their resources through a standard web browser or through the Citrix online plug-in.

1) Verify web server hardware

2) Install recommended Windows Enterprise operating system (OS) and patches

3) Create Windows Network Load Balancing (NLB) or clustering service

4) Install and configure Internet Information Service (IIS) and requisite components

5) Install and configure web interface

6) Test web interface functionality on Web browser of choice

Second Amendment
Cerner Corporation

22 of 106

MA-042-18010399

HCA ASR 19-000679

Page 22 of 106

7) Provide Web interface knowledge transfer

    c.   Citrix Secure Gateway Installation and Configuration(as required)

The deployment of the Secure Gateway depends on several factors, including which Citrix components Client has in its enterprise network. It is designed to work with Citrix XenApp. If Client's enterprise network contains a server farm, County can deploy the Secure Gateway to provide secure Internet access to published resources. In such deployments, the Secure Gateway works with the web interface to provide authentication, authorization, and redirection to published resources hosted on a Citrix XenApp server.

To ensure that the security of the Secure Gateway is not compromised, Citrix recommends reserving servers for the exclusive use of the Secure Gateway.

1) Verification of Secure Gateway server hardware

2) Obtaining and installing digital certificates onto web servers

3) Configuration of IP settings for DMZ, trusted

4) Configuration settings for web interface redirect

5) Obtaining and installing digital certificates onto Secure Gateway

6) Testing of Secure Gateway appliance with web interface redirect

7) Citrix Secure Gateway knowledge transfer

    d.   Installation and Configuration of Windows NLB or Clustering Service

1) Windows NLB can be used to enable a fault-tolerance

2) Web interface solution that is integrated with Secure Gateway without requiring a hardware load balancing device

3) Install web interface/ Secure Gateway on the additional redundant server

4) Create a NLB cluster for the web interface servers and configure the cluster

5) Create a NLB cluster for the Secure Gateway

    e.   Estimated Duration

1) One week, depending upon Client availability

11. ON-PRODUCTION/PRODUCTION CITRIX INSTALL FOR UP TO 12 SERVERS

Implementing and configuring Contractor's Citrix solution requires specialized knowledge and tight integration between multiple layered components of IBM WebSphere message queuing (MQ) messaging software, Oracle, and Cerner Millennium.

    a.   Overview

1) Contractor will provide the following services to implement Citrix as set forth in this Scope. Certain tasks are dependent upon the availability of County's technical personnel for verification and testing. The engagement set forth in this Scope is designed to provide a Citrix implementation, and includes to the creation of a new Citrix farm consisting of up to 12 Citrix servers in any combination of production and non-production servers, 1 Citrix web interface server, and 1 structured query language (SQL) data store / Citrix license server.

Second Amendment
Cerner Corporation
23 of 106
MA-042-18010399
HCA ASR 19-000679
Page 23 of 106

b. Initial Phase
    1) Identify hardware and software system requirements
    2) Planning
        a) Reviewing existing network layout
            (1) Network access (remote access service (RAS), internet, local area network (LAN), wide area network (WAN), wireless)
        b) Reviewing existing domain structure (W2K AD,W2k3 AD)
        c) Windows terminal services (WTS)
        d) Drive configuration
            (1) User and group discussion
            (2) Application compatibility and coexistence
            (3) Printer configuration strategy
            (4) Terminal services (TS) license server requirements
        e) Citrix server
            (1) Creation of SQL data store
            (2) Attaching to the database for the datastore
            (3) License server requirements
            (4) Network configuration and account authority issues
            (5) Determining Citrix administrator accounts
            (6) Citrix client strategy
            (7) Naming conventions
        f) Web application delivery services
            (1) Access requirements (internal / external access)
c. Implementation
    1) Installation of appropriate version on Microsoft Windows with terminal services
        a) Confirm network and power connectivity
        b) Configure operating system (OS) properties
        c) Review and patch OS as required
    2) Installation of Citrix server components
        a) License server configuration
            (1) Installation of appropriate Windows OS and patches
            (2) Installation of license server (add and activate licenses)
        b) Data store configuration
            (1) Installation of appropriate Windows OS and patches
            (2) Installation of SQL server
            (3) Configuration of SQL database
        c) Citrix Application Server

Second Amendment
Cerner Corporation
HCA ASR 19-000679

24 of 106

MA-042-18010399
Page 24 of 106

(1) Installation of appropriate Citrix hotfixes/patches

(2) Farm configuration properties

d) Basic connectivity verification with County

e) Installation of universal print drivers

f) Installation of *Cerner Millennium*

g) Selection of solutions

h) Configuration of *Cerner Millennium* for multi-user environment

i) Configuration of server-specific settings

j) Code update strategies

k) Publish *Cerner Millennium* applications

l) Application launch verification

m) Configuration and testing of Multum connectivity (if applicable)

n) Configuration and testing of bar code scanning (if applicable

d. Configuration

1) Security configuration

a) New technology file system (NTFS) rights

b) Group and local policy and profile implementation

c) User rights configuration

d) Remote desktop protocol (RDP)/independent computing architecture (ICA) connections configured

e) Security configuration validated

2) Citrix load management

a) Define rules

b) Configure evaluators

c) Assign evaluators to servers

d) Test load balancing configuration

e. Server System Management Discussion

1) Current configuration discussion

2) Terminal server system administration

3) Server backup and restore techniques

4) Load management

5) Performance monitoring

6) User and group maintenance

7) Client and software distribution strategies

8) System recovery/replacement discussion

9) Published application management

10) OS and Citrix patching strategy

Second Amendment
Cerner Corporation

25 of 106

MA-042-18010399

HCA ASR 19-000679

Page 25 of 106

      f.   County Installation and Configuration

        1)   End user workstation Citrix client selection

        2)   County configuration and update

        3)   Test connectivity

        4)   Knowledge transfer for Windows administrator throughout the entire phase

      g.   Citrix Web Interface Installation and Configuration(as required)

        1)   The web interface provides users with internal access to Citrix applications and content and virtual desktops. Users access their resources through a standard web browser or through the Citrix online plug-in

        2)   Verification of web server hardware

        3)   Installation of recommended Windows enterprise OS and patches

        4)   Creation of Windows network load balancing or clustering service

        5)   Installation and configuration of internet information service (IIS) and requisite components

        6)   Installation and configuration of web interface

        7)   Test web interface functionality on Web browser of choice

        8)   Web interface knowledge transfer

      h.   WTS Location

        1)   The WTS Location utility is an add-on management tool that handles default location and directory information for all user home directories

        2)   This task is accomplished via an SQL database

        3)   WTS Location alleviates the need to visit individual servers to perform directory management, thus saving administrators a great deal of time

        4)   WTS AdminKit (WTS Location) configuration – assumes County owns tool

          a)   Test WTS Location functionality

          b)   WTS Location login scripting (if necessary)

        5)   WTS Location implementation for Citrix servers knowledge transfer to technical team

      i.   Deliverables

        1)   Cerner will provide a network and desktop services technology architect to perform the tasks set forth in this Scope, including:

          a)   Thin client implementation

          b)   Windows terminal services design discussion

          c)   Windows terminal services configuration document

          d)   Knowledge transfer sessions for information systems (IS) and end user personnel

          e)   Windows terminal services consulting and Support services

Second Amendment
Cerner Corporation
MA-042-18010399

f) Documentation and status reports (as required)

g) Performance analysis spreadsheet

h) Thin client remote technical support – for 2 weeks following the completion of this engagement

j. Estimated Duration

1) 3 to 4 weeks, depending upon County availability

12. CITRIX NETSCALER IMPLEMENTATION SERVICES

a. Overview

1) Contractor will provide technical consultation services to implement a Citrix NetScaler solution for connectivity to the application server. Installation and configuration will be completed so as to test the core functionality to the application server.

2) Certain tasks are dependent upon the availability of County technical personnel for verification, testing, and knowledge transfer. Contractor will identify such County tasks at the beginning of the engagement to facilitate scheduling and coordination. Contractor will perform the work activities set forth below.

b. Site Readiness Document Discussion (Remote)

1) Provide NetScaler Site Readiness Checklist document to Client

2) Schedule and conduct site readiness review discussion with Client

c. Hardware Verification (On-Site)

1) Verify the NetScaler hardware

2) Confirm applications and hardware are configured and ready for testing and production

3) Assist in making the hardware available on Intellinet for remote support from Contractor via out-of-band management port (if applicable)

d. Remote Technical Support

1) Remote technical support is provided for 2 weeks following engagement completion. After such time, support should be requested via the standard support channels

e. Deliverables

1) Installation and configuration of Citrix NetScaler

2) Knowledge transfer for installation, configuration, and operational procedures

3) Documentation for installation, configuration, and operational procedures

4) Scheduling and completion of design discussion with County

5) Detailed drawing of Citrix NetScaler layout

6) User process flow diagrams

f. Assumptions

1) County is familiar with the core technologies used in this solution

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Second Amendment
Cerner Corporation
27 of 106
MA-042-18010399
HCA ASR 19-000679
Page 27 of 106

2) All work will be performed at County facility unless otherwise noted or agreed upon

3) County sign-off document must be completed within 2 weeks following delivery

4) Configuration of the load balancer will follow Contractor's best practices

g. Estimated Duration

1) From planning, design, installation and testing, the overall project will require 5 days of work effort

13. RECOVERY MANAGER FOR CAREAWARE MULTIMEDIA IMPLEMENTATION SERVICES

a. Overview

1) Recovery Manager (RMAN) implementation services have been developed by Contractor to provide a robust Oracle database backup and restore solution to the Contractor Oracle based solutions. Contractor works with County to determine business rules and best practices in the database backup and restore arena.

b. Work Activities

1) Contractor will perform the following work activities:

a) Review configuration and make recommendations for RMAN configuration

b) Implement Contractor's RMAN solution (including the RMAN catalog)

c) Perform Oracle backups on each assigned database

d) Demonstrate database restore and recoverability

e) Perform up to 8 hours County knowledge transfer

f) Perform annual support and maintenance for Contractor RMAN scripts

2) County execution of this Contractor Sales Order entitles County to perpetual usage and support for Contractor's RMAN solution as documented in this Scope and the RMAN user guide.

c. Deliverables

1) A successful full online or offline backup of Oracle instances defined between Contractor and County

2) A successful incremental online or offline database backup

3) A successful full database restore

4) A successful tablespace restore

5) A successful datafile restore

6) A successful archive log backup from those databases in archive log mode

7) A successful archive log restore

8) Up to 8 hours of knowledge transfer from Contractor to County

9) Contractor's Oracle backup and restore solution (scripts)

10) Creation of a RMAN recovery catalog

11) Contractor's recommended backup and tape rotation strategy

Second Amendment
Cerner Corporation
28 of 106
MA-042-18010399
HCA ASR 19-000679
Page 28 of 106

12) Contractor's RMAN user's guide

    d.   Estimated Duration

        1)   Four weeks

14. VMWARE SERVICE-ENTERPRISE DESIGN AND IMPLEMENTATION PHASE

Implementing and configuring VMWare solution requires specialized knowledge and tight integration between multiple layered components of *Cerner Millennium*

    a.   Service Overview

        1)   Contractor will provide the following services to implement VMWare as described in this Scope.

        2)   Certain tasks are dependent upon the availability of County's technical personnel for verification and testing. The services set forth in this Scope are designed to provide a VMWare implementation, and include the creation of a new virtualized environment consisting of up to 5 virtual servers.

    b.   Enterprise Phase

        1)   Two vSphere Hypervisor (ESXi) servers with up to 5 virtual machines completed up to guest operating system (OS)

        2)   One virtual center server

        3)   Installation requires a dual processor, dual network interface server at a minimum

        4)   Conduct enterprise phase implementation kickoff meeting

            a)   Review project scope

            b)   Review pre-travel checklist.

               (1) Confirmation of hardware and software delivery as required.

               (2) Verification of required software licenses and installation media

            c)   Verify server environment

               (1) Verification of hardware installation as required (servers, storage area network (SAN), network drops and power sources)

               (2) Verification of infrastructure (naming System, internet access, internet protocol (IP) addresses, domain account)

                   (a) Reserved machine names (physical ESXi server and virtual machines)

                   (b) Network IP addresses (physical ESXi Server and virtual machines

        5)   Review completed documentation of each planned ESXi server configuration with each specific virtual machine.

            a)   Review each specific documented hardware configuration.

               (1) Processor(s)

               (2) Logical disk configuration

                   (a) Internal storage

                   (b) Attached storage area network

Second Amendment
Cerner Corporation

29 of 106

MA-042-18010399

HCA ASR 19-000679

Page 29 of 106

(3) Memory

(4) Number of physical network interface cards (NICs)

(5) Fibre channel cards

(6) Any virtual machine application specific hardware

b) Review physical VMWare virtual center server capacity requirements and configuration

(1) Random access memory (RAM), processor, storage, and network

(2) County device and database requirements

(3) Managed hosts requirements

(4) Virtual machine requirements

(5) Virtual center licensing

(6) Virtual center VMotion requirements

(a) Licenses and hardware

(7) Virtual center template requirements

c) Review documented virtual center server hardware/software configuration

(1) RAM, processor, storage, and network

(2) County device and Database Requirements

(3) Managed hosts requirements

(4) Virtual machine requirements

(5) Virtual center licensing

(6) Virtual center VMotion requirements

(a) Licenses and hardware

(7) Virtual center template requirements

d) Review virtual center server configuration migration strategy to physical server and structured query language (SQL) database.

6) Review enterprise implementation design documentation/plan

7) Review and confirm deployment strategy with appropriate County personnel

a) Big bang or staged approach

8) Review physical to virtual machine migration/completely new virtual machines plans

a) Downtime expectations for physical to virtual (P2V) migrations if required

b) Cutover strategy for virtual machine replacements for physical machines

9) Review virtual machine cloning and templates

10) Review virtual machine dependencies

a) Availability of network resources

b) Availability of virtual/physical machine resources

11) Review Client device requirements for VMWare console and system tools

Second Amendment
Cerner Corporation

30 of 106

MA-042-18010399

HCA ASR 19-000679

Page 30 of 106

12) Review virtual machine rollback strategy as required

13) Review virtual machine failover/failback policies as required

14) Review virtual machine creation strategy

15) Install VMWare ESXi server per completed pre-installation checklists

    a) Configure server hardware

    b) ESXi server software installation

        (1) Licensing

        (2) Memory allocation

        (3) Peripheral component devices

        (4) Disk partitioning

        (5) Service console configuration

        (6) Root password/user setup

        (7) Management user interface login

            (a) Create VMkernel swap space

            (b) Define virtual ethernet switches

            (c) Configure NIC's to VMkerne

            (d) Set virtual machine file system (VMFS) volume properties

    c) Advanced ESXi server deployment via scripted installation (as required)

        (1) Hardware and software requirements

        (2) Script creation and testing

16) Install Virtual Center Server

    a) Prepare the database (new or migrated)

        (1) Database backup and maintenance requirements

    b) Installing Virtual Center

    c) Migration with P2V

    d) Created new from templates

17) Review VMWare server network and security requirements

    a) Review existing domain structure (Windows NT, active directory)

    b) Review existing network naming service

    c) Domain user and group discussion

18) Review VMWare ESXi server naming and internet protocol (IP) address requirements

19) Review VMWare server and Virtual Machine backup and recovery strategy

20) Compare VM backup strategies

    a) Guest OS or service console

21) Back up VMWare service console

    c. Knowledge Transfer

Contractor will provide knowledge transfer to assigned information technology (IT) staff during entire project, provide updated documentation to Contractor's enterprise phase design documentation, and review documents and any changes made during project. Topics include:

1) Virtual machine administration
    a) Install remote console
    b) Adding virtual machines
        (1) Configuring standard options
        (2) Configuring processor and memory
        (3) Configuring virtual disks
        (4) Configuring removable devices
        (5) Configure other hardware
        (6) Configuring guest OS
            (a) Connect CD-ROM to virtual machine (VM)
            (b) Install guest OS
            (c) Install VMWare tools
    c) Deploying virtual machines
        (1) Creating templates
        (2) Cloning
        (3) Export/import virtual disks
        (4) Provide guidance and knowledge transfer for County on the following:
            (a) Installation, configuration or migration of required application or service (this is County responsibility)
                i. Testing application or service configuration/functionality (this is County responsibility)
                ii. Performance/stress testing as required (this is County responsibility)
    d) Knowledge transfer on virtual machine administration with virtual center server
        (1) Navigation
        (2) Users, licenses and permissions
        (3) Farms and hosts
        (4) Virtual machines
            (a) Migrating
            (b) Creating new VMs
            (c) Templates
            (d) Guest OS customization
            (e) Editing VM configurations
        (5) Scheduled tasks

Second Amendment
Cerner Corporation
32 of 106
MA-042-18010399
HCA ASR 19-000679
Page 32 of 106

(6) Alarms and events

2) Process to monitor application or service for issues

    a) Analyzing workloads/resource utilizations

    b) Allocating/managing resources

        (1) Central processing unit (CPU)

        (2) Memory

        (3) Storage

        (4) Network

    c) VMWare user and group management

    d) Command –line tools

    e) VMWare server troubleshooting techniques

d. Deliverables

    1) Updated pre-installation documents for ESXi server and virtual machines

    2) Updated enterprise phase design diagram

    3) Updated enterprise phase implementation detailed project plan

    4) Contractor ESXi server installation and configuration guide

e. Estimated Duration

    1) Estimated project duration is 3 to 4 weeks, depending on County availability.

15. VMWARE SERVICES INITIAL PHASE

a. VMServices-Initial Phase

    1) One VMware Elastic Sky X (ESX) server with up to 5 virtual machines (VMs) completed up to guest operating system (OS)

    2) Installation requires a dual processor, dual network interface, server minimum

    3) Guidance and knowledge transfer for Client's selected application and/or service

b. Initial Phase: Implementation Kickoff Meeting

    1) Review project scope

    2) Review Event Activity Report (EAR) and Client sign-off requirements

    3) Review pre-travel checklist

        a) Confirmation of hardware and software delivery as required1

            (1) Verification of required software licenses and installation media

        b) Server environment verification

            (1) Verification of hardware installation as required (servers, storage area networks (SAN), network drops, and power sources

            (2) Verification of infrastructure (naming system, internet access, internet protocol (IP) addresses, domain account)

                (a) Reserved machine names (physical ESX server and VMs)

                (b) Network IP addresses (physical ESX server and VMs

Second Amendment
Cerner Corporation

33 of 106

MA-042-18010399

HCA ASR 19-000679

Page 33 of 106

4) Review and complete pre-installation documents
    a) Document ESX server hardware configuration
       (1) Make and model
       (2) Processor(s)
       (3) Internal storage
       (4) Attached storage/SAN
       (5) Logical disk configuration (raid configuration, volumes types, sizes and names)
       (6) Memory
       (7) Number of physical network interface cards
       (8) Fibre channel cards SAN
       (9) Reserved machine name
       (10) Network IP addresses
    b) Document configurations of selected Cerner mid-tier server VMs
       (1) Document resource requirements (per "Cerner Server Consolidation Strategy Guide") for the following:
         (a) Processor(s)
         (b) Memory
         (c) Disk storage (# of volumes, sizes, names)
       (2) Number of virtual network interface cards (NICs)
       (3) Reserved machine name
       (4) Network IP address(es)
       (5) Specific configuration requirements based on Client selected VM candidates
    c) Identify and document VMware server network and security requirements
       (1) Review existing domain structure (NT, W2K AD, W2K3 AD)
       (2) Review existing network naming service
       (3) Domain user and group discussion
  c. Installation of Virtual Server Environment
    1) Installation of VMware ESX server
       a) Configure server hardware
       b) ESX server software installation
       (1) Licensing
       (2) Memory allocation
       (3) PCI devices
       (4) Disk partitioning
       (5) Service console configuration

Second Amendment
Cerner Corporation

34 of 106

MA-042-18010399

HCA ASR 19-000679

Page 34 of 106

      (6) Root password/user setup

      (7) Management user interface login

        (a) Create VMkernel swap space

        (b) Define virtual ethernet switches

        (c) Configure NIC's to VMkernel

        (d) Set VMware VMFS volume properties

  2) Virtual machine installation

    a) Install remote console

    b) Adding VMs for Client selected servers

      (1) Configure standard options

      (2) Configure processor and memory

      (3) Configure virtual disks

      (4) Configure removable devices

      (5) Configure other hardware

      (6) Configuring guest OS

        (a) Connect CD-ROM or ISO image to VM

        (b) Install guest OS

        (c) Install VMware tools

  3) Knowledge transfer on VM administration with virtual center server

    a) Navigation

    b) Users, licenses and permissions

    c) Farms and hosts

    d) Virtual machines

      (1) Creating new VMs

      (2) Templates

      (3) Guest OS customization

      (4) Editing VM configurations

      (5) Knowledge transfer on process to monitor application or service for issues

  4) Knowledge transfer on VM performance optimization and management

    a) Analyzing workloads/resource utilizations

    b) Allocating/managing resources

      (1) CPU

      (2) Memory

      (3) Storage

      (4) Network

    c) Client device requirements for VMware console and system tools

    d) VMware user and group management

      e) Command–line tools

      f) VMware server troubleshooting techniques

   d. Deliverables

     1) Pre-installation documents for ESX server and VMs

     2) Contractor ESX server installation and configuration guide

   e. Training

     1) Knowledge transfer to assigned IT staff throughout the entire engagement

16. EBS SAN/STORAGE-ADVISORY OVERSIGHT SERVICES (PER WEEK)

   a. Overview

     1) The Enterprise Backup and Storage Project Oversight services include project management and access to Contractor resources with a storage array, SAN fabric, and data protection expertise. The services are provided in 1 week increments. Contractor will perform the following tasks:

      a) Review solution design with County and vendor

      b) Review solution prerequisites and compatibility with County and vendor

      c) Review Contractor solution requirements and design with County and vendor

       (1) Logical unit number (LUN) sizes, quantities, masking, etc.

       (2) SAN fabric design, zoning, etc.

       (3) Backup type, frequencies, etc.

      d) Project management (kick-off meeting, coordinate resources, etc.)

     2) This Scope does not include the following tasks:

      a) Installation of any hardware

      b) Installation of any software

      c) Custom scripting

   b. Environment Limitations

     1) Services are limited to the following environments:

      a) Storage array implementations, upgrades, refreshes, or migrations

      b) SAN fabric implementations, upgrades, refreshes, or migrations

      c) Data protection implementations, upgrades, refreshes, or migrations

   c. Deliverables

     1) Project status updates

     2) Contractor solution-specific requirements and design

   d. Assumptions

     1) All hardware, physical, and environmental requirements are met (floor space, rack space, cables, power, cooling, etc.)

   e. Estimated Duration

     1) One week

17. IBM WEBSPHERE NETWORK DEPLOYMENT INSTALL AND CONFIGURATION

Second Amendment   36 of 106

Cerner Corporation   MA-042-18010399

HCA ASR 19-000679   Page 36 of 106

a. Service Overview

1) Contractor will provide technical consultation services to implement the IBM WebSphere Application Server Network Deployment solution. In this implementation, both hardware-level and application-level redundancy is provided therefore this Scope includes installing IBM WebSphere Application Server Network Deployment in a redundant configuration

b. Contractor Responsibilities

1) Verification of server hardware

2) Assistance in making the hardware available on Intellinet for remote support from Contractor

3) Installation of IBM WebSphere Application Server Network Deployment

4) Installation of IBM WebSphere Deployment Manager for remote management (1 per cell)

5) Installation of required/recommended fixes for IBM WebSphere Application Server Network Deployment

6) Installation of IBM HTTP server/on-demand router (ODR), either integrated on the WebSphere servers or on separate hardware

7) Installation of required/recommended fixes for IBM HTTP server/on-demand router (ODR)

8) Creation of production and certification cells
Installation of cluster and clustered application servers spread across administrative cell and associated nodes for application failover

9) Configuration of clustered application servers deployed to the cluster

10) Infrastructure functionality testing

c. Deliverables

1) IBM WebSphere Application Server Network Deployment solution installed and configured as set forth in this Scope

2) Knowledge transfer for installation, configuration, and operational procedures

3) Documentation for installation, configuration, and operational procedures

d. Estimated Project Duration
Two to 4 weeks depending on County availability. Work will be performed remotely unless otherwise noted or agreed upon

18. 2SENTINEL SERVICES-UPGRADE(MIGRATION)

P2Sentinel Clinical Enterprise is an enterprise-level audit logging solution for tracking user access to confidential patient data and enables the capability to audit how patient information is accessed throughout an enterprise. Under the Health Insurance Portability and Accountability Act (HIPAA) provider organizations must implement a system of accountability with regards to how patient information is accessed, used, and disclosed.

Second Amendment
Cerner Corporation
HCA ASR 19-000679

37 of 106

MA-042-18010399
Page 37 of 106

a. Overview

1) Contractor will upgrade the *P2Sentinel* environment by upgrading the existing *P2Sentinel* solution on new hardware running the *P2Sentinel* solution. The upgrade service will be completed so as to provide the same level of functionality prior to the project

a) Advanced configuration of the *P2Sentinel* solution application is not provided as part of this Scope

2) Certain tasks are dependent on the availability of County technical personnel for verification, testing, and knowledge transfer. Contractor will identify those County tasks at the beginning of the project to facilitate scheduling and coordination

b. Installation Checklist (Remote)

1) Provide installation checklist document to County

2) Schedule and conduct pre-travel review discussion with County

c. Hardware and Application Server Verification

1) Verify server hardware to ensure it meets the minimum requirements for the new application

2) Assist in making the hardware available on Intellinet for remote support from Contractor if necessary

d. Upgrade of Non-Production P2Sentinel Environment

1) Modify the non-production *Cerner Millennium* application node(s) auditing settings to turn off auditing for downtime preparation

2) Install *P2Sentinel* Enterprise solution

3) Test core application functionality of the *P2Sentinel* solution

4) Modify the *Cerner Millennium* application node(s) for auditing

e. Upgrade of Production P2Sentinel Environment

1) Modify the production *Cerner Millennium* application node(s) auditing settings to turn off or re-route auditing for downtime preparation

2) Upgrade *P2Sentinel* Enterprise solution to latest version

3) Test core application functionality of the *P2Sentinel* solution

4) Move and convert existing report sets to the new the new version of *P2Sentinel* (5.0)

5) Modify the *Cerner Millennium* application node(s) for auditing and point the auditing feed to the production *P2Sentinel* server

f. Deliverables

1) Existing *P2Sentinel* Enterprise solution upgraded as outlined in this Scope

2) Knowledge transfer for installation, configuration and operational procedures

3) User training

4) Documentation for installation, configuration and operational procedures

Second Amendment
Cerner Corporation

38 of 106

MA-042-18010399

HCA ASR 19-000679

Page 38 of 106

g. Assumptions

    1) County is familiar with the core technologies used in this solution

    2) County has the Red Hat Linux operating system installed on the server(s)

    3) Red Hat Enterprise Linux installation service on production and non-production is not included in this Scope

    4) All work will be performed at County's location unless otherwise noted or agreed upon

h. Estimated Duration

    1) Four to Six weeks after hardware is in place

19. OLYMPUS UPGRADE

Olympus provides a single console to manage and monitor to the *Cerner Millennium* environment. Olympus allows County to manage systems across all architectural platforms from one location. Contractor provides the expertise required for installing and configuring Olympus on supported application server technologies

a. Overview

    1) Cerner will provide technical consultation services to upgrade the Olympus solution in one of the client domains. Installation and configuration of Olympus will be conducted by Cerner. Training regarding configuration and upgrades will be provided after initial setup. Additional domain configurations will be performed by the client with Cerner's assistance as part of the training.

    2) Certain tasks are dependent on the availability of County technical personnel for verification, testing, and knowledge transfer. Contractor will identify those County tasks at the beginning of the engagement to facilitate scheduling and coordination. The following work activities will be performed by Contractor:

b. Pre-travel Checklist Discussion (Remote)

    1) Provide pre-travel checklist document to County

    2) Schedule and conduct pre-travel review discussion with County

c. Hardware and Application Server Verification

    1) Verification of server hardware

    2) Assistance in making the hardware available on Intellinet for remote support from Contractor

d. Installation

    1) Upgrade active directory application mode (ADAM) instance (if applicable)

    2) Upgrade Olympus schema

    3) Upgrade Olympus console

    4) Upgrade Sentinel on backend and frontend system(s)

      a) Sentinel is installed on each system that is managed by Olympus. It is often referred to as a managed system or managed server

Second Amendment
Cerner Corporation
39 of 106
MA-042-18010399
HCA ASR 19-000679
Page 39 of 106

5) Upgrade my structured query language (MySQL) for Guardian

    a) Guardian is a service responsible for collecting data from managed systems

6) Verify Olympus environment

7) Upgrade Olympus Smart Module schema file(s) (If applicable)

8) Upgrade Alerting and Thresholding schema

    a) The Alerting and Thresholding engine enables users to proactively monitor the *Cerner Millennium* application by generating e-mails and pages when parameters cross an established threshold

9) Import updated baseline parameters

e. Configuration

1) Configure enterprises and profiles

2) Configure Guardian, if applicable

3) Configure Olympus users

4) Configure Olympus security and roles

5) Create Guardian profile to start monitoring service

6) Set baseline guardian collection intervals

7) Define email addresses and distribution lists for notifications

8) Configure rule Instances

9) Configure auditing for monitoring service, if desired

10) Enable dashboards

11) Configure Olympus security for each Smart Module

12) Configure Olympus user and role security for each Smart Module

13) Configure Guardian to collect each Smart Module category

14) Configure Alerting for each Smart Module, if applicable

f. Deliverables

1) Olympus solution installed and configured as outlined in this Scope

2) Knowledge transfer and documentation for installation, configuration and operational procedures

g. Assumptions

1) County is familiar with the core technologies used in this solution

2) All work will be performed at County's location unless otherwise noted or agreed upon

h. Estimated Project Duration

1) The number of servers to be set up will determine the exact requirements and time needed for the project

i. Other Requirements

1) Hardware for Olympus lightweight directory access protocol (LDAP) server(s):

Second Amendment
Cerner Corporation

40 of 106

MA-042-18010399

HCA ASR 19-000679

Page 40 of 106

a)   Minimum Windows 2003 server SP1 or higher OR Windows 2008 server (2.0 GHz CPU, 2 GB random access memory (RAM), and 20 gigabyte free disk space). Additional hardware and sizing details will be provided by Contractor

2)   Hardware for Olympus Guardian server(s):

a)   Minimum Windows 2003 server SP1 OR Windows 2008 server or Linux RedHat AS 4.x/5.x (Dual 2.0 GHz CPU, 4 GB RAM, and 30 GB free disk space). Additional hardware and sizing details will be provided by Cerner

3)   Olympus LDAP server member of Windows active directory domain in which end users are also a member

4)   Windows service account for Olympus used to authenticate systems managed by Olympus

5)   Windows service account a member of Windows active directory domain in which end users are also a member

6)   Contrator Intellinet connectivity to the Contractor backend and the Olympus console(s) via PC-anywhere

7)   Performing Contractor associate(s) must have high-privilege access to the systems being serviced as needed

20. CAREAWARE MULTIMEDIA-HIGHLY AVAILABLE

a.   Service Description

1)   Contractor will provide services for configuration and training for *CareAware MultiMedia* Archive in a highly available cluster

b.   Prerequisites

1)   Unless the Equipment and Sublicensed Software is set forth in the "Solutions and Services" section of this Ordering Document, Client is responsible for set up of any equipment not purchased through Contractor. If equipment is not purchased through Contractor, County is responsible to meet the specifications as outlined in the *Cerner Clinical Imaging – Supported and Planned Technology Guide*. Contractor's technology architect will coordinate the validation of the existing County environment and planned technology.

c.   Configuration

1)   Contractor will provide the following services:

a)   Initial configuration of a *CareAware MultiMedia* server in a highly available cluster at one location for one domain

b)   Initial database sizing and configuration

c)   Initial configuration for long term storage according to the technical storage sizing specifications set forth in the Solutions and Services, Equipment and Sublicense Software sections of this Agreement or provided to County as a separate document

2)   Contractor will set up and test the High Availability software.

Second Amendment
Cerner Corporation
41 of 106
MA-042-18010399

HCA ASR 19-000679
Page 41 of 106

    d.   Training

       1)   Contractor will provide a one day on-site training event for the system administrator

    e.   Conversion Support

       1)   Contractor will provide eight hours of conversion support

    f.   Assumptions

       1)   The image backup strategy is not included in this Scope and will be supplied by County or contracted separately.

       2)   This Scope does not include the implementation and configuration of front-end applications or acquisition devices

  21. ORACLE DATABASE ASM STORAGE OVERSIGHT

Automatic Storage Management (ASM) simplifies administration of Oracle related files by allowing the administrator to reference disk groups rather than individual disks and files managed by ASM. The ASM functionality is an extension of the Oracle Managed Files (OMF) functionality that also includes striping and mirroring to provide balance and secure storage.

The main components of ASM are disk groups, each of which comprise of several physical disks that are controlled as a single unit. The physical disks are known as ASM disks, while the files that reside on the disks are known as ASM files. The locations and names for the files are controlled by ASM. This service performs Oracle ASM implementation, knowledge transfer and storage oversight on County's system during an ASM implementation project.

    a.   Overview

       1)   Provide project planning, leadership, and settings knowledge transfer

       2)   Assist County and storage supplier with defining the Oracle ASM requirements

          a)   Recommend a design based on Contractor best practices for using Oracle ASM on Contractor implementations

          b)   Recommend storage requirements including:

             (1)   Recommendation on ASM layout design

             (2)   Target database, flash, redo, and archive spaces with storage area network (SAN) array logical unit number (LUN) sizes

             (3)   Oracle ASM kernel

       3)   Provide documentation of Oracle ASM pre-requisites including:

          a)   Disk storage space requirements

          b)   File system layout and sizing

          c)   RAW device naming conventions

          d)   Operating system (OS) version

          e)   High availability (HA) version if used

          f)   Cerner Millennium compatibility requirements

Second Amendment
Cerner Corporation
42 of 106
MA-042-18010399
HCA ASR 19-000679
Page 42 of 106

4) Validate Oracle software availability and licensing requirements

5) Validate Oracle ASM installation pre-requisites have been met

6) Confirm HA strategy

7) Review existing database layout

8) Create the Oracle ASM instance if applicable

9) Install latest productivity tools if appropriate

10) Create required ASM disk groups

11) Start up, shut down, and test Oracle ASM software

12) Use commercially reasonable efforts to deliver, as applicable, the documentation, drawings, and environmental specifications in a format or containing content reasonably conforming to County's documentation standards for like documents. When there are multiple occurrences of the same service, Contractor's work effort and deliverables shall be adjusted to take into account the then current technical environment including updated maintenance and management checklists

    b. Deliverables

       1) Project documentation, including but not limited to:

         a) Pre-requisites

         b) Implementation

         c) Storage requirements and ASM layout design

         d) Installation of the ASM productivity tools

         e) Creation of required ASM disk groups

         f) Startup, shut down, and testing of Oracle ASM software

         g) Operational knowledge transfer

         h) Production environment change authorization (PECA) forms requiring County signature. These forms will be presented to County describing access requirements and items being reviewed on County's production environment prior to work being performed

         i) Event Activity Report (EAR) forms requiring County signature upon completion of designated solution implementation

    c. Pre-Requisites

       1) Source and Target nodes identified

       2) Administrative access to source and target nodes granted

       3) Remote access via Cerner's Intellinet or other remote access solution provided

       4) Installation of Oracle kernels and Contractor recommended Oracle patches completed

       5) Database related pre-requisites and requirements are met

       6) Existing Oracle Cluster Ready Services (CRS) kernel is functional, if applicable

       7) Installation of recommended *Cerner Millennium* service packages in source domain completed

Second Amendment
Cerner Corporation
43 of 106
MA-042-18010399
HCA ASR 19-000679
Page 43 of 106

8) All required licenses and software necessary are present

9) Confirmation that all County devices are supported

10) Appropriate OS level installation on target node completed

11) Appropriate network connectivity available

    a) If in an Oracle Real Application Cluster (RAC) environment, validate inter-node network setup and connectivity in the cluster is appropriately setup and configured

12) All required disk space

d. Project Planning and Leadership

1) Contractor will oversee planning, execution, and communication relative to database assessment services including:

    a) Communicating with County about the team of consultants involved with the project

    b) Scheduling and conducting follow up review discussion with County technical teams

    c) Ensuring County has access to all required service packages as needed

    d) Ensuring technology services are delivered consistently and according to Contractor recommendations

    e) Creating and driving deliverables through Contractor's *MethodM*

e. Knowledge Transfer

1) Solution specific knowledge transfer or training will include:

    a) Oracle ASM start up and shut down

    b) ASM productivity tools

    c) Disk group creation

    d) Adding or removing disks from ASM disk groups

    e) Oracle RAC failover and support if implemented as part of the oversight

    f) New features and known issues of Oracle stack uplift as appropriate

    g) Contractor database technology roadmap

    h) Navigating Contractor support and technology pages

    i) Contractor support basics and tools

    j) Oracle release validation cycles and *Cerner Millennium* code dependencies

    k) Technology upgrades, planning, execution, and support

    l) Storage and growth management

    m) Tnsnames.ora file requirements

2) In addition to the structured knowledge transfer planned, Contractor anticipates numerous knowledge transfer opportunities during the implementation phase. On-site visits may be planned in advance and County will be encouraged to shadow Contractor consultants to maximize

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Second Amendment
Cerner Corporation

44 of 106

MA-042-18010399

HCA ASR 19-000679

Page 44 of 106

knowledge transfer opportunities. Additional training beyond this knowledge transfer may be required and is the responsibility of County to obtain.

        f.   Post-Implementation Support

           1)   Contractor will provide remote project support on an as needed basis up to 30 days post implementation

              a)   After the post go-live support, all future support will be available to County through Contractor's Immediate Response Center (IRC) for critical production related issues or the Immediate Answer Center (IAC) for general non-urgent support

During the post go-live period Contractor will assist County with database support and tuning as needed

        g.   County Obligations

           1)   County is responsible for the following tasks as related to this Scope:

              a)   Obtain all necessary media necessary for migration

              b)   Define all necessary pre-requisites in the Oracle configuration and migration guide

              c)   Complete or will complete all HA, host, and related third party software and hardware configuration

              d)   Ensure host definitions have been generated and are available for connection

              e)   Provide host interface information, including, but not limited to, destination address, local adapter address, exchange ID, and remote and local logical unit (LU) names, etc.

              f)   Provide Contractor administrative access to the systems being serviced as needed

              g)   Designate a representative to serve as County project manager to act as the focal point for Contractor relative to this project and will have the authority to act on County's behalf in matters regarding this project

              h)   Provide documentation of requested configurations on an as needed basis

              i)   Provide documentation and support phone numbers for all hardware and software providers

              j)   Provide County resources for any knowledge transfer made available as part of this implementation

              k)   Conduct County operational testing

              l)   Verify/install *Cerner Millennium* packages to support new Oracle release as required

              m)   Verify/install latest installation tools in source domain

              n)   Create or designate validation environment to be used with target validation database

              o)   Perform all system operating system, networking, storage, file system, Oracle kernel, and any additional layered product installation

Second Amendment
Cerner Corporation
    45 of 106
MA-042-18010399
HCA ASR 19-000679   Page 45 of 106

2) County agrees that Contractor will bypass the verification processes, if connections cannot be verified due to incompatible architecture, hardware connectivity incompatibilities, and wrong software levels, etc. (i.e. unsupported or bad cabling, third party unreliable equipment, unsupported network interface cards)

3) If County cannot complete any of the requirements or responsibilities set forth in this Scope, County may purchase additional professional services hours at Contractor's then-current fees for Contractor to complete the work

4) The following activities are not included in this Scope and will not be implemented:

    a) Installation or upgrade of Oracle relational database management system (RDBMS), Oracle RAC or other Oracle software

    b) Provisioning of storage to the host systems

    c) Installation or upgrade of any system related software or services including:

    d) OS version

    e) HA version if used

    f) *Cerner Millennium* service packages if required

    g) Oversight of a non-RAC database to use a new Oracle RAC configuration

    h) Creation of a test database utilizing the new ASM storage

    i) Migration of an existing database storage to ASM unless part of a Contractor database migration project

  h. Assumptions

1) All prerequisite work related to the delivery of this solution is complete prior to implementation

2) County is familiar with the core technologies used in this solution

3) Contractor has remote access to County nodes

4) All work will be delivered remotely outside the planned and agreed upon site visits

5) Contractor will have required access to the systems where work is to be performed

    a) This may include privileged accounts and possible physical access as needed

6) Any downtime(s) imposed by pre-requisites will not be part of this Scope and will be completed separately from execution of this Scope

  i. Duration and Work Effort

1) Estimated project duration is 2 weeks depending on County availability and system connectivity.

2) Typical on-site work requires 1 site visit. The specific requirements of this project may determine additional site visits. These site visits will be coordinated and agreed on by County

  22. DATABASE MIGRATION-STANDBY SERVICES

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Second Amendment
Cerner Corporation

46 of 106

MA-042-18010399

HCA ASR 19-000679

Page 46 of 106

This service performs an Oracle Database Migration or database upgrade utilizing a standby database copy. This migration performs a like-for-like copy of the source database to new storage located on either existing or new database hardware.

    a. Overview

        1) Provide project planning, leadership, and settings knowledge transfer

        2) Migrate up to 1 *Cerner Millennium* database to new storage including:

            a) Review preloaded Oracle kernel implementation including applicable Oracle patches per Contractor best practices

            b) Verify all required licenses and software related to migration

            c) Create target database data file logical volumes as needed

            d) Create new target database using Contractor recommended best practices

            e) Size system global area (SGA)

            f) Create new tnsnames.ora file on target system

            g) Replicate source database to target database using a database backup/restore process

            h) Synchronize real-time data between source and target databases

                (1) Synchronization will be maintained between the source and target databases until the go-live activation of the target database

            i) Create 1 validation copy of the source database

        3) Activate database at go-live and provide go-live and post go-live support

Use commercially reasonable efforts to deliver, as applicable, the documentation, drawings, and environmental specifications in a format or containing content reasonably conforming to Contractor's documentation standards for like documents. When there are multiple occurrences of the same service, Contractor's work effort and deliverables shall be adjusted to take into account the then current technical environment including updated maintenance and management checklists

    b. Deliverables

        1) Project documentation, including but not limited to:

            a) Pre-requisites documentation

            b) Implementation documentation

            c) One migrated copy of source database

            d) One new migration validation database

            e) Pre conversion readiness and go-live work plan review

            f) Go-live support

            g) Post go-live support

            h) Operational knowledge transfer

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Second Amendment
Cerner Corporation
47 of 106
MA-042-18010399
HCA ASR 19-000679
Page 47 of 106

i) Production environment change authorization (PECA) forms requiring County signature. These forms will be presented to County describing access requirements and items being reviewed on County's production environment prior to work being performed

j) Event Activity Report (EAR) forms requiring County signature upon completion of designated solution implementation

c. Pre-Requisites

1) Identified source and target nodes

2) Administrative access to source and target nodes

3) Remote access via Contractor's Intellinet or other remote access solution

4) Installation of Oracle kernels and Contractor recommended Oracle patches

5) Installation of recommended *Cerner Millennium* service packages in source domain

6) Copy of source domain application to use with validation database

7) Appropriate operating system level installation on target node

8) Appropriate network connectivity

9) All required disk space

10) Source database must be configured for locally managed tables (LMT)

d. Project Planning and Leadership

1) Contractor will oversee planning, execution, and communication relative to database assessment services including:

a) Communicating with County about the team of consultants involved with the project

b) Scheduling and conducting follow up review discussion with County technical teams

c) Ensuring County has access to all required service packages as needed

d) Ensuring technology services are delivered consistently and according to Contractor recommendations

e) Creating and driving deliverables through Cerner's *MethodM*

e. Knowledge Transfer

1) Solution specific knowledge transfer will include:

a) Database startup and shutdown

b) Tnsnames.ora file requirements

c) Oracle spfile and parameter settings

d) Oracle Real Application Clusters (RAC) failover and support if implemented as part of the migration

e) New features and known issues of Oracle stack uplift as appropriate

f) Contractor Database Technology Roadmap

g) Navigating Contractor support and technology pages

h) Contractor support basics and tools

i) Oracle release validation cycles and *Cerner Millennium* code dependencies

j) Technology upgrades, planning, execution and support

k) *Cerner Millennium* database management tools and toolkits

l) Storage and growth management

2) In addition to the structured knowledge transfer planned, Contractor anticipates numerous knowledge transfer opportunities during the implementation phase. On-site visits may be planned in advance and Contractor will be encouraged to shadow Contractor consultants to maximize knowledge transfer opportunities. Additional training beyond this knowledge transfer may be required and is the responsibility of County to obtain

f. Go-Live Support

1) Contractor will provide up to 24 hours of dedicated support for the go-live event

a) This support is provided on-site over a 3 day period during the go-live event

2) Go-live activities include:

a) Shutting down existing source domain

b) Performing final transaction transfer from source to target databases

c) Performing database compare between source and target databases

d) Performing character set conversion if required

e) Activating target database

f) Updating tnsnames.ora file on source application nodes to see new target database

g) Supporting County functional testing of new database

g. Post Go-Live Support

1) Contractor will provide remote project support on an as needed basis up to 30 days post go-live

2) After the post go-live support, all future support will be available to County through Contractor's Immediate Response Center (IRC) for critical production related issues or the Immediate Answer Center (IAC) for general non-urgent support

a) During the post go-live period Contractor will assist County with database support and tuning as needed

h. County Obligations

1) County is responsible for the following tasks as related to this Scope:

a) Ensure host definitions have been generated and are available for connection

b) Provide Contractor administrative access to the systems being serviced as needed

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Second Amendment
Cerner Corporation

49 of 106

MA-042-18010399

HCA ASR 19-000679

Page 49 of 106

c) Designate a representative to serve as County project manager to act as the focal point for Contractor relative to this project and will have the authority to act on County's behalf in matters regarding this project

d) Provide documentation of requested configurations on an as needed basis

e) Provide documentation and support phone numbers for all hardware and software providers

f) Provide County resources for any knowledge transfer made available as part of this implementation

g) Perform County operational testing

h) Provide County resources for any knowledge transfer made available as part of this implementation

i) Verify/install *Cerner Millennium* packages to support new Oracle release

j) Verify/install latest installation tools in source domain

k) Create or designate validation environment to be used with target validation database

l) Update *Cerner Millennium* fat clients, Citrix, or other systems needing access to the new database. These may include but not limited to the following:

(1) tnsnames.ora entries as necessary

(2) Updated Oracle client as needed

m) Install all system operating systems, networking, storage, file systems, Oracle kernels, and any additional layered products

n) Validate domain creation

o) County agrees that Contractor will bypass the verification processes, if connections cannot be verified due to incompatible architecture, hardware connectivity incompatibilities, and wrong software levels, etc. (i.e. unsupported or bad cabling, third party unreliable equipment, unsupported network interface cards)

2) If County cannot complete any of the requirements or responsibilities set forth in this Scope, County may purchase additional professional services hours at Contractor's then-current fees for a Contractor resource to complete the work

3) The following activities are not included in this Scope and will not be implemented:

a) Installation of high availability (HA) or Oracle RAC solutions

b) Installation of Oracle kernels

c) Migration of admin database if required

d) Migration of additional non-production databases

e) Implementation and testing of database backup solutions in new configuration

f) Migration and/or re-installation other software installed on new servers

Second Amendment
Cerner Corporation
50 of 106
MA-042-18010399

HCA ASR 19-000679
Page 50 of 106

(1) Examples include recovery manager (RMAN), Tivoli Storage Manager (TSM), BMC Patrol, etc.

g) Conversion of the database storage to Oracle Automatic Storage Management (ASM) unless combined with these services

h) Conversion from rules based optimization (RBO) to cost based optimization (CBO) unless combined with these services

i. Assumptions

1) County is familiar with the core technologies used in this solution

2) Contractor has remote access to County nodes

3) All prerequisite work related to the delivery of this solution is complete

4) All work will be delivered remotely outside the planned and agreed upon site visits

5) Contractor will have required access to the systems where work is to be performed

a) This may include privileged accounts and possible physical access as needed

j. Duration and Work Effort

1) Estimated project duration is 12 weeks, depending on County availability and system connectivity

2) Typical on-site work requires 1 site visit. The specific requirements of this project may determine additional site visits. These site visits will be coordinated and agreed on by County

23. NUANCE DRAGON CLOUD MIGRATION SERVICES

Nuance *Dragon* Medical One is a speech-recognition solution that allows users to enter notes and text into other software applications, using their voice instead of a keyboard. Nuance *Dragon* can be used with any application, including *Microsoft Outlook*, *Microsoft Word*, Notepad, and *Cerner Millennium*, even when the application is delivered via *Citrix*.

a. Overview

1) Contractor will provide technical consultation and implementation services to migrate existing on-premise Nuance Management Console (NMC) to the Nuance Cloud NMC

b. Contractor Responsibilities

1) Schedule and conduct pre-install review discussion with County

2) Provide pre-install checklist document to County

3) Conduct a discovery call to:

a) Determine facilities, departments, or units that will be migrated

b) Define roles and responsibilities

c) Determine timelines for implementation and projected go-live date

d) Confirm remote access requirements for the installation

e) Review existing server and County workstation hardware to meet the minimum requirements of the application

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f) Assist in making hardware available on Intellinet for remote support from Contractor if necessary

g) Confirm pre-install requirements have been completed

4) Upgrade existing Nuance *Dragon* Medical One software to latest version

5) Install and configure up to 5 County workstations with Nuance *Dragon* Medical One

6) Conduct post-migration validation confirming:

a) Sites and group structure created; users assigned to groups

b) Roles function as expected (administrator, account administrator, etc.)

c) User profiles created and profile paths validated

d) User licenses assigned

7) Conduct technical training

a) Conduct Nuance *Dragon* help desk training off or on-site for up to 6 County attendees

b) Conduct Nuance *Dragon* administrator training for up to 5 County attendees

c) Provide a technical review of the Nuance *Dragon* solution, troubleshooting tips and tricks, escalation paths and responsibilities, and frequently asked questions

c. Deliverables

1) Nuance Cloud NMC upgrade and migration

2) Site-specific Nuance *Dragon* technical architecture document provided

3) NMC migration system validation performed

4) Administrator training

5) Help desk training

d. Assumptions

1) Certain tasks are dependent on the availability of County technical personnel for verification and testing. Contractor will identify those County tasks at the beginning of the project to facilitate scheduling and coordination

2) County will be responsible for installing necessary software on Citrix servers unless remotely hosted

a) Contractor will provide installation services for remotely hosted clients

3) County workstations meet minimum requirements

4) This Scope is limited to the migration of the existing on-premise NMC and technical components for systems capable of supporting up to 500 users and 1 Active Directory. For larger systems, additional services are required.

24. POWERINSIGHT EXPLORER INSTALL/UPGRADE

a. Description

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Second Amendment
Cerner Corporation

52 of 106

MA-042-18010399

HCA ASR 19-000679

Page 52 of 106

1   1) PowerInsight Explorer uses the technology of SAP BusinessObjects to deliver
2 meaningful data to stakeholders in an organization. With PowerInsight Explorer, organizations have the
3 ability to perform the following actions:

4   a) Create SQL database queries by using drag-and-drop functionality to move
5 predefined objects in *SAP BusinessObjects*.

6   b) Use the library of existing report templates to deliver immediate data to users
7 across a healthcare organization.

8   c) Push reports to a Web site for viewing by an entire clinical community.

9   d) Schedule reports and queries to execute off hours or at set intervals.

10   e) Create advanced graphics and charting capabilities that users can convert to a
11 number of different file formats, including Microsoft Excel and an Acrobat Reader document (.PDF
12 file).

13   b. Project Planning and Leadership

14   1) Contractor will oversee planning, execution, and communication relative to
15 PowerInsight Explorer implementation services including:

16   a) Communicating with County about the team of consultants involved with the
17 project

18   b) Scheduling and conducting follow up review discussion with County technical
19 teams

20   c) Ensuring technology services are delivered consistently and according
21 to recommendations

22   c. Pre-Requisites

23   1) An available Windows 2016 R2 server built to Cerner's Business Objects server
24 software specifications

25   2) An available Citrix server built to Cerner's Business Objects client software
26 specifications

27   3) An available Websphere Application Server (WAS) 8.5 cell to deploy Business
28 Objects web applications

29   d. County Responsibilities

30   1) Providing access to WebSphere Integrated Solutions Console

31   2) Providing a local admin account to the Business Objects server

32   3) Providing access to domain database for creating Business Objects tablespace and
33 users

34   4) Providing access to Active Directory to create Service Principal Name (SPN)
35 required for Windows Active Directory Integration

36   e. Contractor Responsibilities

37   1) Verifying of server hardware

Second Amendment
Cerner Corporation

53 of 106

MA-042-18010399

HCA ASR 19-000679

Page 53 of 106

2) Assisting in making the hardware available on Intellinet for remote support from Contractor

3) Installing Business Objects

4) Installing Business Objects client tools on the Citrix server

5) Installing Oracle client on Business Objects server

6) Deploying the Business Objects web applications

7) Migrating Business Objects CMS and File Repository

8) Install the Millennium PowerInsight Explorer package

9) Assisting with infrastructure functionality testing

f. Deliverables

1) PowerInsight Explorer solution installed and configured as set forth in this Scope

2) Knowledge transfer for application installation, configuration, and operational procedures

3) Documentation for installation, configuration, and operational procedures

g. Assumptions

1) This Scope consists of deployment of the Business Objects application and Millennium PowerInsight package. Installation and configuration of PowerInsight reports are handled with a separate scope.

2) Virtual or physical servers will be available and the account given for the installation will be an administrator on servers as part of project kick off.

3) All work will be performed remotely unless otherwise noted or agreed upon. On site work may extend project duration and cost.

4) Business Objects installation media will be available as part of kick off.

h. Duration

1) 1 week per BusinessObject Server

25. PROFESSIONAL SERVICES

a. Description

Hours have been purchased by COUNTY at a rate per hour listed below for the ongoing development and / or maintenance of the system, services for upgrades or new software systems not yet implemented, implementation of any system upgrades for any software already installed during the term of the Agreement or any subsequent agreement between the parties, project planning, support work and on-site instructor time for training.

1) Fee For Services Hours:

a) 1750 System Engineer consulting hours at $150 per hour

b) 625 Interface Architect hours at $140 per hour

c) 1000 Technical Engagement Leader hours at $195 per hour

2) Hours Pool

Second Amendment
Cerner Corporation

54 of 106

MA-042-18010399

HCA ASR 19-000679

Page 54 of 106

a) Contractor will deliver in conjunction with County, a design, build, test and rollout of custom of custom mpages, custom rules and NCPDP Script Uplift. The custom development will be done in alignment with the specifications provided by the County. Project estimation 16 weeks

(1) ePrescribe Consultant- 150 hours

(2) Ambulatory Consultant 160 hours

(3) Custom Rule Engineer 240 hours

(4) Custom mPage Engineer 120 hours

(5) Interface Architect 50 hours

b) County will retain an hours pool to be used for project management and consulting needs

(1) 310 hours at $140 per hour

(2) 2420 hour at $150 per hour

26. CLINICAL REPORTING XR MIGRATION CONSULTING SERVICES

a. Services Overview

Clinical Reporting XR is Contractor's solution for initiating and processing clinical reports. A clinical report (or chart) is a document containing patient demographic and clinical result information. Clinical Reporting XR collects information from *the IRIS system* to print on reports generated by manual workflows and/or automated processes through an Enterprise Appliance WebSphere Application Server (EAWAS).

b. Duration

1) 4 months from kickoff to go-live

c. Events supported

1) Pre-kickoff (remote)

2) Kickoff (remote)

3) Maintenance Training/Testing (remote)

4) Go-Live (remote)

d. Services

1) Analysis of current state Win32 platform

2) Design of future state XR platform (with recommendations for system improvement)

3) Build into one non-production environment defined by client, including

a) All templates will be built to replace Win32 chart formats

b) All distributions and expedites built by Contractor

c) Purge jobs, privileges, and preferences as they relate to Clinical Reporting XR

4) Manually rebuild entire solution into production environment, including the same items listed above

5) Weekly 1-hour phone call for project touch base

Second Amendment
Cerner Corporation

55 of 106

MA-042-18010399

HCA ASR 19-000679

Page 55 of 106

6) Remote support for all events

   e. Equipment and licensing requirements

      1) Enterprise Appliance WebSphere Application Servers (EAWAS)

         a) 2 dedicated for production

         b) 1 dedicated for non-production

      2) The XR archive will utilize CAMM or a network file location"

4.   Paragraph I. Scope of Use Limits and Expansion, subparagraph C. of Exhibit B to the Agreement is hereby amended as follows:

"C. Scope of Use Expansion Limit:

Family Solution	Part #	Product	Metric	Limit	Scope Expansion	Additional License Fees	Additional Monthly Support
Capstone	CP-20735	Reg. Management	FTE	2,775	135	$6,431.45	$83.07
	CP-20740	Scheduled Management	FTE	2,775	135	$5,411.55	$69.90
	CP-20745	Enterprise Master	FTE	2,775	135	$2,889.82	$37.33
		Person Index					
	CP-26105	Discern Expert	FTE	2,775	135	$1,376.17	$17.78
	CP-26140	Discern Explorer	FTE	2,775	135	$688.08	$8.89
CareNet	PS-22720	Ent. Care Doc	FTE	2,775	135	$3,051.80	$39.42
Open	OE-20850	Open Engine	FTE	2,775	135	$769.40	$9.94
Engine	OE-22850	TCP/IP Comm Srv	FTE	2,775	135	$261.19	$3.37
PathNet	PA-20070	General Lab	FTE	2,775	135	$1,569.70	$190.91
	PA-20075	Microbiology	FTE	2,775	135	$1,177.27	$143.18

Second Amendment
Cerner Corporation

MA-042-18010399

Family Solution	Part #	Product	Metric	Limit	Scope Expansion	Additional License Fees	Additional Monthly Support
	PA-22205	Outreach Srv	FTE	2,775	135	$549.39	$66.82
	PA-26105	Discern Expert	FTE	2,775	135	$941.82	$114.55
	PA-26140	Discern Explorer	FTE	2,775	135	$549.39	$66.82
Power Chart	PS-20570	Clinical / Data Repository	FTE	2,775	135	$11,385.12	$147.06
	PS-22090	Cerner / Knowledge Index	FTE	2,775	135	$1,357.00	$17.53
	PS-26105	Discern Expert	FTE	2,775	135	$2,518.94	$32.54
	PS-26140	Discern Explorer	FTE	2,775	135	$1,357.07	$17.53
Power Chart Office	PV-20229	Clinical Office	FTE	2,775	135	$70,500.00	$910.63
	PV-20235	Ambulatory / Business Office	FTE	2,775	135	$10,000.00	$129.17
	PV-20240	Ambulatory / Support Office	FTE	2,775	135	$35,500.00	$458.54
	PV-26105	Discern Expert	FTE	2,775	135	$8,230.00	$106.30
	PV-26140	Discern Explorer	FTE	2,775	135	$2,940.00	$37.98

Family Solution	Part #	Product	Metric	Limit	Scope Expansion	Additional License Fees	Additional Monthly Support
ProFit	PF-20450	Billing & A.R.	FTE	2,775	135	$7,690.09	$99.33
	PF-26105	Discern Expert	FTE	2,775	135	$641.84	$8.29
	PF-26140	Discern Explorer	FTE	2,775	135	$320.92	$4.15
	PF-99999	Contract Exception	FTE	2,775	135	$320.92	$4.15
CareAware Multimedia	MM-22260	CareAware Multimedia - Digital Objects	Gigabytes	500	50	$6,003	$85
CareAware Multimedia	MM-22260	CareAware Multimedia- Digital Objects	Gigabytes	500	50	$6,003	$85
Foreign System Interfaces-FSI	IF-29020	Orders Incoming with Statuses	FTEs	2775			
Health Info Mgmt	MR-20400	Cerner Health Information Management	FTEs	850	85	$14,686	$208
Patient Portal	PY-28010	Connect to Cerner Health: Send to Cerner Health Mpage	Prod Domain	1	1	$0	$0
Disaster Recovery	CTP-DRTOOLKIT	DR Millennium Toolkit	Domain	1	1	$101,500	$1,692
P2Sentinel	CTP-P2S-ENT-3	P2Sentinel Enterprise 12 Cores	Core	12	2	$10,417	$156

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Family Solution	Part #	Product	Metric	Limit	Scope Expansion	Additional License Fees	Additional Monthly Support
Power Insight	PI-20611	Power Insight Explorer	Prod Domain	1	1	$193,193	$2,505
High Availability Solutions	CTP-HASCR	HA Scripts for Cerner Millennium Host (per CPU)	CPU	33			
MPages	PS-22700	Mpages Development Toolkit	Outpatient Visits	188,000	18,800	$14,880	$248
Cerner Workflow Authentication	CTP-HASCR	HA Scripts for Cerner Millennium	CPU's	33	4	$6,000	$200
Nuance Dragon	DMONE-UPG-TERM	DM One, Term, User License, Upgrade from DMNE	Users	40	1		$2,375
P2Sentinel	P2S-SEC-SRV-PKG	P2Sentinel-Security as a Service SD100347_03	Gigabyte Per Day	2			
			Years	3			
			Report Executions Per Month	200			
			Custom Reports Per Year	5			
			Named User Accounts	5			

Second Amendment
Cerner Corporation
59 of 106
MA-042-18010399
HCA ASR 19-000679
Page 59 of 106

D. The Licensed Software shall be used solely for the purposes of processing Data resulting from or related to procedures performed at Permitted Facilities.

E. CONTRACTOR agrees that COUNTY has the right to expand, delete, or substitute Permitted Facilities set forth in Paragraph B. above (upon written notification to CONTRACTOR and subsequent amendment of this Exhibit) provided the metric identified does not exceed the "Scope of Use Limit" set forth above. These rights to expand, delete, or substitute Permitted Facilities do not apply with respect to any interface software fees or services, and do not include any installation, custom programming, Implementation or Support services from CONTRACTOR.

F. In the event the Scope of Use limits are exceeded, CONTRACTOR and COUNTY also agree that COUNTY may purchase licenses to extend the use of the Licensed Software for the expansion fees and the additional monthly support fees indicated above or as agreed upon by both parties.

G. COUNTY's Scope of Use Limits shall be measured annually by COUNTY by the end of the third quarter of each contract period, and such measurement shall be reported to CONTRACTOR.

1. COUNTY's Scope of Use limits for FTEs shall be based on COUNTY's peak FTE count during the then current term. In the event COUNTY exceeds its Scope of Use limit(s), COUNTY shall also report the dates on which COUNTY first exceeded the applicable Scope of Use limit(s).

2. CONTRACTOR may conduct (at its cost), and COUNTY will provide all reasonable information and access necessary for, any audit or investigation into COUNTY's Scope of Use upon thirty (30) days prior written notice to COUNTY, provided that any such request for audit shall not be made any more frequently than once every twelve (12) months unless any audit reveals noncompliance by COUNTY in which case CONTRACTOR may audit COUNTY more frequently, at CONTRACTOR's reasonable discretion, until COUNTY is no longer noncompliant.

H. COUNTY agrees that if an event occurs that will affect COUNTY's Scope of Use, COUNTY will notify CONTRACTOR of such an event so that COUNTY's Scope of Use can be reviewed. CONTRACTOR understands that COUNTY's FTE count may increase as a result of COUNTY's receipt of certain grant funding. CONTRACTOR agrees not to include personnel hired by COUNTY in the FTE count, provided that such personnel (a) are being paid for by COUNTY solely from the applicable grant funds, (b) are performing work solely as it relates to the applicable grant, and (c) are Limited Term Employees or consultants.

I. Provided that COUNTY stays within its Scope of Use limits, any additional fees due under this Paragraph shall be mutually agreed upon by the Parties and said amount shall be added to the base line amount for Licensed Software Support in the subsequent fiscal year agreement as stated in Subparagraph VIII.D.2. of Exhibit A to the Agreement.

J. Single Software and Hardware Environment: - COUNTY may expand its Scope of Use (for Licensed Software identified in this Exhibit B) by paying the applicable additional license and support fees set forth in Paragraph C above, so long as any third party facility, new facility or new volumes are processed and operated out of COUNTY's single software application environment and single data

center environment identified as the Designated Facility above. COUNTY may avail itself of the distributed client server capabilities built into the HNA Millennium architecture and distribute the servers from a single data center to multiple data center(s) assuming COUNTY notifies CONTRACTOR of its intentions and supporting reasons in advance and protects CONTRACTOR's proprietary rights in the same manner as provided in the Agreement. However, if the third party facility, new facility or volumes are not processed from the same physical application or hardware environment, it will be considered a new installation and a new client to CONTRACTOR. The fees associated for such new client will be based on CONTRACTOR's then-current pricing methodology. New functionality, product installation and project management fees will be purchased under a new agreement.

K. COUNTY agrees to provide a minimum of one, and not more than two, points of contact per product and a minimum of one, and not more than two, points of contact in COUNTY's data centers for Support requests to CONTRACTOR, which contact persons may be changed upon notice to CONTRACTOR. In the event the contact person is unavailable during an emergency, CONTRACTOR will honor Support requests from another authorized representative of COUNTY.

L. Disaster Recovery Scope of Use Expansion

1. In the event COUNTY needs to expand the capacity Scope of Use of the Disaster Recovery system, the Agreement will be amended to reflect the new Scope of Use and any associated costs.

2. Growth in System Requirements

a. COUNTY may expand its Capacity Scope of Use Limit (for Disaster Recovery Services in this Agreement) by paying the applicable additional Disaster Recovery Service fees as set forth below:

Metric Description	Extending Scope of Use Limit by	One-Time DR Services Fees	Additional Monthly DR Services Fees
Processor (Processor Type as defined in Capacity Scope of Use Section above)	(1) Processor	$1,200	$600
Disk Space	(100) Gigabytes	$480	$240
Concurrent Logons	(100) Concurrent Logons	$600	$400
Chart Server (Single CPU)	(1) Server	$300	$150
Telco Mbps per Circuit Expansion or additional new circuits will be priced on case by case basis	TBD	$TBD	$TBD

Second Amendment
Cerner Corporation

61 of 106

MA-042-18010399

HCA ASR 19-000679

Page 61 of 106

b.   In addition, if Scope Expansion pricing is applicable, the Disaster Declaration Fee and Weekly Hot Site production fees will be increased by the same proportion (%) increase as the percent (%) increase in the Hot Site Standby Monthly Fee.

3.   Solutions: The solutions CONTRACTOR plans to recover in the event of a disaster are noted in the section entitled "In-Scope Solutions" below. CONTRACTOR's ability to recover these solutions is based upon the information and metrics provided in sizing the Disaster Recovery system. Should changes occur to the production system without also notifying CONTRACTOR as noted above for Scope of Use Expansion, CONTRACTOR's ability to recover the COUNTY's production system will be limited.

a.   Included Solutions:
1)   Access Management
2)   CapStone (Access Management)
3)   CareNet (Clinical Documentation)
4)   CONTRACTOR Ambulatory
5)   Open Engine
6)   Open Port Interfaces
7)   PathNet
8)   Patient Accounting
9)   PowerChart
10)   Charting XR
11)   HIM
12)   MPages

b.   Excluded Solutions:
1)   Database Migrations
2)   High Availability Solutions
3)   Knowledge Solutions
4)   Learning Services
5)   Olympus Alerting
6)   Recovery Manager
7)   WTS Location Toolkit
8)   CAMM
9)   P2 – P2 SaaS is included separately
10)   CPDI
11)   Dragon
12)   ePrescribe
13)   Enterprise Appliance servers
14)   PI Explorer

15) Health Sentry

16) Patient Portal

17) CONTRACTOR Hub"

M. Scope of Use Expansion Services as described in this Exhibit B are deemed as optional services by COUNTY. If COUNTY elects to obtain such optional services, COUNTY and CONTRACTOR shall mutually agree in writing via an amendment or a letter of agreement and/or concurrence to this Agreement, the services to be provided and the applicable cost for those services, up to the applicable aggregate dollar amount(s) shown in the applicable table above.

N. Application Management Services Scope of Use Limits

1. The Application Management Services ("AMS") fees set forth in the "Solutions and Services" section of this Ordering Document are based on the following scope of use limits:

Scope of Use Metric	Scope of Use Limit
Licensed Software to be managed ("**Managed Software**")	CareNet/Documentation Content 360/Document Imaging (CPDI) Core (Charge Services, Clinical Reporting/XR, FSI, Print Services/RRD) Health Information Management System (ProFile) HealtheLife MPages P2 Sentinel PathNet Gen Lab/Specimen Management PathNet Microbiology PathNet Outreach Services Patient Accounting PowerChart/PowerChart Ambulatory PowerOrders Registration Management Scheduling Management
Production Domains	One (1) production domain commencing upon First Productive Use of the Managed Software and continuing through the Term.
Non-Production Domains	One (1) certification domain commencing upon First Productive Use of the Managed Software and continuing through the Term.
Facilities	Permitted Facilities under County of Orange Health Care Agency as referenced within this Agreement,
Number of Providers	Up to One Hundred (100) Providers

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Second Amendment
Cerner Corporation
HCA ASR 19-000679

63 of 106

MA-042-18010399
Page 63 of 106

Configuration Change Backlog	CONTRACTOR will accept backlog configuration requests that are appropriately vetted, prioritized, and authorized by COUNTY leadership. The configuration changes are to be submitted as COUNTY resources are able to fully engage with design and validation changes each week. These configuration changes will be identified during the transition period and will be prioritized and completed within an agreed upon timeframe by COUNTY and the CONTRACTOR AMS engagement leader after the transition period has been completed. Configuration changes may include adding orders, CCL modifications, event sets, and building new PowerForms; as examples. *Note:* These backlog configuration changes will not be subject to Service Level Agreements (SLAs).
Content Updates (i.e., Multum, ICD-10, CPT-4)	As required
New Custom Reports	Fifteen (15) new CCL reports or rules per year
New Discern Rules	Thirty (30) new *Discern* rules per year

Note. The content listed above is not exhaustive, but does cover the primary content packages. To avoid any doubt, AMS will keep all licensed content current for the Term stated in this Agreement. County must purchase licenses to all content set forth in the table above. Implementation of such content is not included as part of AMS. For example, ICD-10 initial implementation is County's responsibility, but CONTRACTOR will complete updates after initial implementation.

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Second Amendment
Cerner Corporation

64 of 106

MA-042-18010399

HCA ASR 19-000679

Page 64 of 106

Scope of Use Limit Exclusions	1) Items not included in this Service:
	
	  a. Technical infrastructure required to run the Managed Software
	
	  b. Third-party software
	
	  c. Professional services for the design and/or build of additional Licensed Software not included in the Agreement
	
	  d. Professional services for the implementation or a comprehensive redesign of the Managed Software
	
	  e. Modifications to source code or addition of custom tables
	
	  f. Development of and/or delivery of end-user training for any Managed Software
	
	  g. Development of interfaces
	
	  h. Development of *Discern* Advisors, *MPages*, and National Hospital Inpatient Quality Measures (NHIQM)
	
	  i. Application Monitoring Services (as set forth in "Application Monitoring") do not apply to non-production domains
	
	  j. Facility or clinic professional services roll-outs
	
	  k. Clinical and support departmental workflow tasks that include or impact patient activity data (i.e., patient combines, placing orders, and documenting results)
	
	  l. Upgrade projects for the implementation of a new Release Upgrade or Service Package Upgrade

2. Scope of Use Expansion

  a. In the event County requests additional AMS support for additional solutions, additional fees will apply and will be determined on a case-by-case basis. Any such additional services or fees shall be set forth in an Amendment to the Agreement. If County has any Managed Software not listed in the above Scope of Use Limits section, and this Managed Software is one that is typically supported by AMS, then this Managed Software must be added to AMS support at the Additional AMS Monthly Fees listed below.

  b. Growth. In the event a scope of use limit set forth above is exceeded, County agrees to pay the following additional AMS fees for the applicable scope of use limit that has been exceeded:

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Second Amendment
Cerner Corporation

MA-042-18010399

Scope of Use Metric	Extending Scope of Use Limit by	Additional AMS Monthly Fees
Managed Software	Five (5) Additional New Custom Reports or Rules per Year	$3,333
Managed Software	Five (5) Additional New Discern Rules per Year	$333
Managed Software	One (1) Additional New Supported Licensed Software Solution	$2,200
Providers	Additional Fifty (50) Providers	$2,500

c.   COUNTY's scope of use will be measured periodically by CONTRACTOR's system tools. COUNTY agrees that if an event occurs that will materially affect COUNTY's scope of use (such as acquisition of a hospital or other facility); COUNTY will promptly notify CONTRACTOR in writing of such event (no later than 6 months prior to the effective date of such event) so that COUNTY's scope of use can be reviewed. Any additional fees due under the "Scope of Use Expansion" section shall be payable within 30 days following COUNTY's receipt of an invoice for such fees. Counties org creation process is not considered a material change and does not affect SOU if provider and FTE's counts do not increase."

5.   Paragraph I. Licensed and Sublicensed Software, Equipment Maintenance and Support Inventory of Exhibit F to the Agreement is hereby amended as follows:

"**I. LICENSED AND SUBLICENSED SOFTWARE, EQUIPMENT MAINTENANCE AND SUPPORT INVENTORY**

A. Shared Computing Services

Cerner Product Code	Product Description	Scope	Qty	One-Time Fee
DMONE-UPG-TERM	DM One, Term User License, Upgrade from DMNE	Users	40	
CTS-DRAGON-DIRECT-INSTALL	Nuance Dragon Direct Installation Services	Client	1	$7,500
Shared Computing Services Total				**$7,500**

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Second Amendment
Cerner Corporation
66 of 106
MA-042-18010399
HCA ASR 19-000679
Page 66 of 106

B. Equipment

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
Brocade SN6600B (2) w_48 16 GB 3 yr						
QK724A	HP B-series 16GB SFP+SW XCVR	96	$169.29	$16,251.84		4001_HPP
HA113A1 5GA	HP Impl SAN – Level 2 Tier 5 Svc	2			$993.06	4001_HPP
HA113A1	HP Installation Service	1				4001_HPP
HA124A1	HP Fctry Exp High End Storage Pkg 5 SVC	1				4001_HPP
HA124A1 5VZ	HP SAN Level 1 Tier 1 Startup SVC	1			$6,217.75	4001_HPP
Q0U57B 05Y	2.4 Jumper (IEC320 C13/C14, M/F CEE 22)	2				4001_HPP
Q0U57B	HPE SN6600B 32GB 48/48 Pwr Pk+FC Switch	2	$29,223.90	$58,447.80		4001_HPP
Technology – Cisco 9300 Switches						
N9K-C93108TC-EX	Nexus 9300 with 48p 10G BASE-T and 6p 100G QsFP28	2	$9,097.50	$18,195.00		
N3K-C3064-ACC-KIT	Nexus 3064PQ Accessory Kit	2				
NXA-PAC-650W-PE	Nexus NEBs AC 650W PSU- Port Side Exhaust	4				
NXA-FAN-30CFM-F	Nexus 2K/3K/9K Single Fan, port side exhaust airflow	8				
CAB-9K12A-NA	Power Cord 125VAC 13A NEMA 5-15 Plus North America	4				
N93-LIC-PAK	N9300 License PAK Expansion	2				
CVR- QSFP-SFP10G =	QSFP to SFP10G adapter	6	$164.06	$984.36		
SFP-10G-SR-S-=	10GBASE-SR SFP Module Enterprise-Class	8	$364.58	$2,916.64		
Technology CAMM Gen10						
BN24Q-03	Unshielded Twisted Pair 100BaseT or 10Base T Crossover	1	$3.48	$3.48		4001_HP

Second Amendment
Cerner Corporation

67 of 106

MA-042-18010399

HCA ASR 19-000679

Page 67 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
TOC_STAGE_ARCH	Integrate hardware, load/configure OS, and place CAMM	2			$1,480.00	
TOC_INSTALL_HDW	Onsite Hardware Installation Services. travel and exp	2			$500.00	
TOC_STAGE_HA	HA Installation per Server (PROD or TEST)	1			$4,500.00	
TOC_STAGE_ARCH	Integrate Hardware, load/configure OS, and place CAMM	2			$1,480.00	
TOC_STAGE_HDW	Onsite Hardware Installation Services Travel and exp	2			$500.00	
BN24Q-03	Unshielded Twisted Pair 100Base T or 10Base T Crossover	1	$3.48	$3.48		4001_HPP
867959-B21	HPE DL360 Gen10 8SFF CTO server	2	$1,302.52	$2,605.04		4001_HPP
867959-B21 ABA	HPE DL360 Gen10 8SFF CTO Server	2				4001_HPP
860663-L21	HPE DL360 Gen10 Intel XeonG 5118 2.3GHz FIO Proc Kit	2	$1,543.33	$3,086.66		4001_HPP
815100_B21	HPE 32GB 2Rx4 PC4-2666V-R Smart Kit	8	$543.10	$4,344.80		4001_HPP
815100_B21 0D1	Factory Integrated	8				4001_HPP
868000-B21	HPE DL360 Gen10 8SFF DR/USB/ODD Blnk Kit	2	$45.25	$90.50		4001_HPP
868000-B21 0D1	Factory Integrated	2				4001_HPP
872374-B21	HPE 400BG SAS 12G MU SFF SC DS SSD	4	$655.10	$2,620.40		4001_HPP
872374-B21 0D1	Factory Integrated	4				4001_HPP
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	2	$84.43	$168.86		4001_HPP
726537-B21 0D1	Factory Integrated	2				4001_HPP
Q0L14A	HPE SN1200E 16Tb 2p FC HBA	2	$1,143.82	$2,287.64		4001_HPP
Q0L14A 0D1	Factory Integrated	2				4001_HPP

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
813661-B21	HPE Eth 10Gb 2p 535T Adptr	2	$344.77	$689.54		4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mm Cable	2	$57.69	$115.38		4001_HPP
P01366-B21-0D1	Factory Integrated	2				4001_HPP
804331-B21	HPW Smart Array P408i-a SR Gen10 Ctrlr	2	$344.85	$689.70		4001_HPP
804331-B21-0D1	Factory Integrated	2				4001_HPP
817721-B21	HPE Eth 10Gb 2p 535FLR-T-Adptr	2	$278.66	$557.32		4001_HPP
339778-B21	HP Raid 1 Drive 1 FIO Setting	2	$0.01	$0.02		4001_HPP
865414-B21	HPE 800W FS Plat Ht Plg LH Pwr Sply Kit	4	$280.36	$1,121.44		4001_HPP
865414-B21 0D1	Factory Integrated	4				4001_HPP
874543-B21	HPE 1U Gen10 SFF Easy Install Rail Kit	2	$70.65	$141.30		
874543-B21 0D1	Factory Integrated	2				
867959-B21	HPE DL360 Gen10 8SFF CTO Server	2	$1,302.53	$2,605.06		4001_HPP
867959-B21 ABA	HPE DL360 Gen10 8SFF CTO Server	2				4001_HPP
860663-L21	HPE DL360 Gen10 Intel XeonG 5118 2.3GHz FIO Proc Kit	2	$1,543.32	$3,086.64		4001_HPP
815100-B21	HPE 32GB 2Rx4 PC4-2666V-R Smart Kit	8	$543.10	$4,344.80		4001_HPP
815100-B21 0D1	Factory Integrated	8				
868000-B21	HPE DL360 Gen10 8SFF DP/USB/ODD Blnk Kit	2	$45.25	$90.50		4001_HPP
868000-B21 0D1	Factory Integrated	2				4001_HPP
872374-B21	HPE 400GB SAS 12G MU SFF SC DS SSD	4	$655.10	$2,620.40		4001_HPP

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
872374-B21 0D1	Factory Integrated	4				
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	2	$84.43	$168.86		4001_HPP
726537-B21 0D1	Factory Integrated	2				4001_HPP
Q0L14A	HPE SN1200E 16Gb 2p FC HBA	4	$1,143.82	$4,575.28		4001_HPP
Q0L14A 0D1	Factory Integrated	4				4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mmC Cable	2	$57.69	$115.38		4001_HPP
P01366-B21 0D1	Factory Integrated	2				4001_HPP
804331-B21	HPE Smart Array P408i-a SR Gen10 Ctrlr	2	$344.85	$689.70		4001_HPP
804331-B21 0D1	Factory Integrated	2				4001_HPP
764302-B21	HPE Flexfbrc 10Gb 4P 536FLR-T Adptr	2	$457.42	$914.84		4001_HPP
865414-B21	HPE 800W FS Plat Ht Plg LH Pwr Sply Kit	4	$202.05	$808.20		4001_HPP
865414-B21 0D1	Factory Integrated	4				4001_HPP
874543 B21	HPE 1U Gen10 SFF Easy Install Rail Kit	2	$70.65	$141.30		4001_HPP
874543-B21 0D1	Factory Integrated	2				4001_HPP
Technology Citrix Gen 10						
867959-B21	HPE DL360 Gen10 8SFF CTO Server	6	$1,014.70	$6,088.20		4001_HPP
867959-B21 ABA	HPE DL360 Gen10 8SFF CTO Server	6				4001_HPP
870974-L21	HPE Dl360 Gen10 XeonP 8160(2.1GHz/24-core/150W)FIO	6	$4,945.17	$29,671.02		4001_HPP
870974-B21	HPE DL360 Gen10 XeonP 8160(2.1GHz/24-core/150W)	6	$4,945.17	$29,671.02		4001_HPP

Second Amendment
Cerner Corporation
70 of 106
MA-042-18010399

HCA ASR 19-000679
Page 70 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
815100-B21	HPE 32GB 2Rx4 PC4-2666V-R Smart Kit	144	$745.50	$107,352		4001_HPP
815100-B21 0D1	Factory Integrated	144				4001_HPP
868000-B21	HPE DL360 Gen10 8SFF DP/USB/ODD Blnk Kit	6	$43.26	$259.56		4001_HPP
868000-B21 0D1	Factory Integrated	6				4001_HPP
P09088-B21	HPE 400GB SAS 12G Mixed Use SFF SSD	12	$729.13	$8,749.56		
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	6	$78.46	$470.76		4001_HPP
726537-B21 0D1	Factory Integrated	6				4001_HPP
Q0L14A	HPE SN1200E 16Gb 2p FC HBA	6	$1,601.34	$9,608.04		4001_HPP
Q0L14A 0D1	Factory Integrated	6				
813661-B21	HPE Eth 10Gb 2p 535T Adptr	6	$453.97	$2,723.82		4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mm Cable	6	$60.00	$360.00		4001_HPP
P01366-B21 0D1	Factory Integrated	6				4001_HPP
804331-B21	HPE Smart Array P408i-a SR Gen 10 Ctrlr	6	$290.38	$1,742.28		4001_HPP
804331-B21 0D1	Factory Integrated	6				4001_HPP
817721-B21	HPE Eth 10Gb 2p 535FLR-T Adptr	6	$331.06	$1,986.36		4001_HPP
865414-B21	HPE 800W FS Plat Ht PLG LH Pwr Sply Kit	12	$180.40	$2,164.80		4001_HPP
865414-B21 0D1	Factory Integrated	12				4001_HPP
874543-B21	HPE 1U Gen10 SFF Easy Install Rail Kit	6	$49.42	$296.52		4001_HPP
874543-B21 0D1	Factory Integrated	6				4001_HPP

Second Amendment
Cerner Corporation
71 of 106
MA-042-18010399
HCA ASR 19-000679
Page 71 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
867959-B21	HPE DL360 Gen10 8SFF CTO Server	2	$1,272.20	$2,544.40		4001_HPP
867959-B21 ABA	HPE DL360 Gen10 8SFF CTO Server	2				4001_HPP
870974-L21	HPE DL360 Gen10 XeonP 8160(2.1GHx/24-cr/150W)FIO	2	$4,963.07	$9,926.14		4001_HPP
870974-B21	HPE DL360 Gen10 XeonP 8160(2.1GHx/24-cr/150W)	2	$5,008.27	$10,016.54		4001_HPP
815100-B21	HPE 32GB 2Rx4 PC4-2666V-R Smart Kit	48	$534.66	$25,663.68		4001_HPP
815100-B21 0D1	Factory Integrated	48				4001_HPP
868000-B21	HPE DL360 Gen10 8SFF DP/USB/ODD Blnk Kit	2	$41.82	$83.64		4001_HPP
868000-B21 0D1	Factory Integrated	2				4001_HPP
P09088-B21	HPE 400GB SAS 12G Mixed Use SFF SSD	4	$729.47	$2,917.88		
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	2	$78.46	$156.92		4001_HPP
726537-B21 0D1	Factory Integrated	2				4001_HPP
Q0L14A	HPE SN1200E 16Gb 2p FC HBA	2	$1,601.34	$3,202.68		4001_HPP
Q0L14A 0D1	Factory Integrated	2				4001_HPP
813661-B21	HPE Eth 10Gb 2p 535T Adptr	2	$409.53	$819.06		4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mm Cable	2	$64.34	$128.68		4001_HPP
P01366-B21 0D1	Factory Integrated	2				4001_HPP
804331-B21	HPE Smart Array P408i-a SR Gen10 Ctrlr	2	$290.38	$580.76		4001_HPP
804331-B21 0D1	Factory Integrated	2				4001_HPP
817721-B21	HPE Eth 10Gb 2p 535T Adptr	2	$331.06	$662.12		4001_HPP
865414-B21	HPE 800W FS Plat Ht Plg LH Pwr Sply Kit	4	$235.26	$941.04		4001_HPP

Second Amendment
Cerner Corporation

72 of 106

MA-042-18010399

HCA ASR 19-000679

Page 72 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
865414-B21 0D1	Factory Integrated	4				4001_HPP
8745432-B21	HP2 1U Gen10 SFF Easy Install Rail Kit	2	$49.42	$98.84		4001_HPP
8745432-B21 0D1	Factory Integrated	2				4001_HPP
HA114A1	HP Installation and Startup Services	1				4001_HPP
HA114AI 5A0	HP Startup Entry 300 Series OS SVC	8			$6,152.96	4001_HPP
Technology EA Gen10						
CFG_CITRIX _NET	NetScaler Load Balancers	1				
3011907-EZ	Citrix NetScaler MPX8005 Standard Edition/2x10GE BASE-)		$14,107.50	$28,215.00		*2501_CIT*
EW3Z0000590	NetScaler MPX 7500/9500/10500/12500/15500/MPX/w AC	2	$677.16	$1,354.32		*2501_CIT*
867959-B21	HPE DL360 Gen10 8SFF CTO Server	3	$1,019.08	$3,057.24		4001_HPP
867959-B21-ABA	HPE DL360 Gen10 8SFF CTO Server	3				4001_HPP
860679-L21	HPE DL360 Gen10 XeonP 8160(2.1GHx/24-cr/150W)FIO	3	$1,253.16	$3,759.48		4001_HPP
860679-B21	HPE DL360 Gen10 XeonP 8160(2.1GHx/24-cr/150W)	3	$1,253.37	$3,760.11		4001_HPP
860679-B21 0D1	Factory Integrated	3				
815100-B21	HPE 32GB 2Rx4 PC4-2666V-R Smart Kit	36	$548.84	$19,758.24		4001_HPP
815100-B21 0D1	Factory Integrated	36				4001_HPP
868000-B21	HPE DL360 Gen10 8SFF DP/USB/ODD Blnk Kit	3	$43.26	$129.78		4001_HPP
868000-B21 0D1	Factory Integrated	3				4001_HPP

Second Amendment
Cerner Corporation

73 of 106

MA-042-18010399

HCA ASR 19-000679

Page 73 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
P09088-B21	HPE 400GB SAS 12G Mixed Use SFF SSD	6	$742.37	$4,454.22		
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	3	$78.46	$235.38		4001_HPP
726537-B21 0D1	Factory Integrated	3				4001_HPP
Q0L14A	HPW SN1200E 16Gb 2p FC HBA	3	$1,639.78	$4,919.34		4001_HPP
Q0L14A 0D1	Factory Integrated	3				4001_HPP
813661-B21	HPE Eth 10Gb 2p 535T Adptr	3	$427.36	$1,282.08		4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mm Cable	3	$64.34	$193.02		4001_HPP
P01366-B21 0D1	Factory Integrated	3				4001_HPP
804331-B21	HPE Smart Array P408i-a SR Gen 10 Ctrl	3	$290.28	$870.84		4001_HPP
804331-B21 0D1	Factory Integrated	3				4001_HPP
817721-B21	HP Eth 10Gb 2p 535FLR-T-Adptr	3	$345.53	$1,036.59		4001_HPP
865414-B21	HPE 800W FS Plat Ht Plg LH Pwr Sply Kit	6	$235.26	$1,411.56		4001_HPP
865414-B21 0D1	Factory Integrated	6				4001_HPP
874543-B21	HPE IU Gen10 SFF Easy Install Rail Kit	3	$49.42	$148.26		4001_HPP
874543-B21 0D1	Factory Integrated	3				4001_HPP
Technology RRD Gen10						
EQZF-01702	Brooktrout TR1034 Fax Board-Analog 4 Channel	2	$2,809.91	$5,619.82		
867959-B21	HPE DL380 Gen10 8SFF CTO Server	2	$1,019.29	$2,038.58		4001_HPP
867959-B21 ABA	HPE DL380 Gen10 8SFF CTO Server	2				4001_HPP
860649-L21	HPE DL360 Gen10 Xeon-B 3140 FIO Kit	2	$273.18	$546.36		4001_HPP

Second Amendment
Cerner Corporation
74 of 106
MA-042-18010399
HCA ASR 19-000679
Page 74 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
815097-B21	HPE 8GB 1Rx8 PC4-2666V-R Smart Kit	8	$158.97	$1,271.76		4001_HPP
815097-B21 0D1	Factory Integrated	8				4001_HPP
868000-B21	HPE DL360 Gen10 8SFF SP/USB/ODD Blink Kit	2	$43.26	$86.52		4001_HPP
868000-B21 0D1	Factory Integrated	2				4001_HPP
P09090-B21	HPE 800GB SAS 12G Mixed Use SFF SSD	4	$1,246.67	$4,986.68		
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	2	$78.46	$156.92		4001_HPP
726537-B21 0D1	Factory Integrated	2				4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mm Cable	2	$64.34	$128.68		4001_HPP
P01366-B21 0D1	Factory Integrated	2				4001_HPP
804331-B21	HPE Smart Array P408i-A SR Gen 10 Ctrlr	2	$290.38	$580.76		4001_HPP
804331-B21 0D1	Factory Integrated	2				4001_HPP
817721-B21	HPE Eth 10Gb 2p 535FLR-T Adptr	2	$348.34	$696.68		4001_HPP
865414-B21	HPE 800W FS Plat Ht Plg LH Pwr Sply Kit	4	$235.26	$941.04		4001_HPP
865414-B2 0D1	Factory Integrated	4				4001_HPP
874543-B21	HPE 1U Gen10 SFF Easy Install Rail Kit	2	$49.42	$98.84		4001_HPP
874543-B21 0D1	Factory Integrated	2				4001_HPP
Technology VM Gen10						
CFG_VMWARE	VMWare Software and ESX Servers	1				
867959-B21	HPE DL360 Gen10 8SFF CTO	4	$1,014.17	$4,056.68		4001_HPP

Second Amendment
Cerner Corporation

75 of 106

MA-042-18010399

HCA ASR 19-000679

Page 75 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
867959-B21 ABA	HPE DL360 Gen10 8SFF CTO	4				4001_HPP
870974-L21	HPE DL360 Gen10 XeonP 8160 (2.1GHz/24-core/150W)FIO	4	$4,963.07	$19,852.28		4001_HPP
870974-B21	HPE DL360 Gen10 XeonP 8160 (2.1GHz/24-core/150W)	4	$5,008.27	$20,033.08		4001_HPP
815100-B21	HPE 32GB 2Rx4 PC4-2666V-R Smart Kit	96	$534.66	$51,327.36		4001_HPP
815100-B21 0D1	Factory Integrated	96				4001_HPP
868000-B21	HPE DL360 Gen10 8SFF DP/USB/ODD Blnk Kit	4	$43.26	$173.04		4001_HPP
868000-B21 0D1	Factory Integrated	4				4001_HPP
P09088-B21	HPE 400GB SAS 12G Mixed use SFF SSD	8	$729.47	$5,835.76		
726537-B21	HPE 9.5mm SATA DVD-RW Jb Gen9 Kit	4	$78.46	$313.84		4001_HPP
726537-B21 0D1	Factory Integrated	4				4001_HPP
Q0L14A	HPE SN1200E 16Gb 2p FC HBA	4	$1,601.34	$6,405.36		4001_HPP
Q0L14A 0D1	Factory Integrated	4				4001_HPP
813661-B21	HPE Eth 10Gb 2p 535T Adptr	4	$409.53	$1,638.12		4001_HPP
P01366-B21	HPE 96W Smart Storage Battery 145mm Cable	4	$64.34	$257.36		4001_HPP
P01366-B21 0D1	Factory Integrated	4				4001_HPP
804331-B21	HPE Smart Array P408i-A SR Gen10 Ctrlr	4	$290.38	$1,161.52		4001_HPP
804331-B21 0D1	Factory Integrated	4				4001_HPP
817721-B21	HPE Eth 10Gb 2p 535FLR-T Adptr	4	$331.06	$1,324.24		4001_HPP
865414-B21	HPE 800W FS Plat Ht Plg LH Pwr Sply Kit	8	$235.26	$1,882.08		4001_HPP

Second Amendment
Cerner Corporation

76 of 106

MA-042-18010399

HCA ASR 19-000679

Page 76 of 106

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Install Fees	Pass-Through Code
865414-B21 0D1	Factory Integrated	8				4001_HPP
874543-B21	HPE 1U Gen10 SFF Easy Install Rail Kit	4	$49.42	$197.68		4001_HPP
874543-B21 0D1	Factory Integrated	4				4001_HPP
HA114A1	HP Installation and Startup Service	1				4001_HPP
HA114A1 5A0	HP Startup Entry	4			$3,076.48	4001_HPP
G3 Impravata Appliance Upgrade						
VIR-APP-G3	G3 Virtual Appliance	3	$0	$0	$0	100004_002
Shipping						**$ 8,408.00**
Tax						**$ 49,125.16**
Equipment Grand Total				**$600,564.98**	**$24,900.25**	**$682,998.39**

C. Sublicensed Software

Solution Code	Description	Qty	Unit One-Time Fees	Extended One-Time Fees	Pass-Through Code
Technology Cisco 9300 Switches					
NXOS-70317.5	Nexus 9500, 9300, 3000 Base NX-OS Software	2			
N93-LAN1K9	LAN Enterprise License for Nexus 9300 Platform	2	$4,166.67	$8,333.34	
Technology CAMM Gen10					
11943-M1	INFOSCALE ENTERPRISE LNX 1 CORE ONPREMISE STANDARD PER	24	$658.86	$15,812.64	
QC-ORIS1P-U9	Oracle Standard Edition One DB, ASFU, Processor Lic	1	$1,844.40	$1,844.40	6006_ORA
11943-M1	INFOSCALE ENTERPRISE LNX 1 CORE ONPREMISE STANDARD PER	24	$658.86	$15,812.64	
QC-ORS1U-U9	Oracle Standard Edition One DB, ASFU, Named User Lic	30	$57.24	$1,717.20	6006_ORA
BD505A	HPE iLO Adv 1-svr Lic 3yr Support	2	$266.25	$532.50	4001_HPP
BD5050 0D1	Factory Integrated	2			4001_HPP
BD505A	HPE iLO Adv 1-svr Lic 3yr Support	2	$266.25	$532.50	4001_HPP
BD505A 0D1	Factory Integrated	2			4001_HPP

Second Amendment
Cerner Corporation
77 of 106
MA-042-18010399
HCA ASR 19-000679
Page 77 of 106

Technology Citrix Gen10					
VS6-EPL-C	VMWare vSphere 6 Enterprise Plus for 1 processor	16	$2,305.48	$36,887.66	
BD505A	HPE iLO Adv 1-svr Lic 3yr Support	6	$259.70	$1,558.22	4001_HPP
BD505A _0D1	Factory Integrated	6			4001_HPP
BD505A	HPE iLO Adv 1-svr Lic 3yr Support	2	$259.70	$519.40	4001_HPP
BD505A 0DA	Factory Integrated	2			4001_HPP
9EM-00120	OLP WIN SVR STD CORE SINGL LICS/SA PK 2LICS NL CORE LIC	48	$166.23	$7,979.04	
Technology EA Gen10					
D55WJLL	Restriced Use- IBM WAS Network Deployment Value Unit	1680	$17.99	$30,223.20	14201_IBM
VS6-EPL-C	VMware vSphere 6 Enterprise Plus for 1 processor	6	$2,305.48	$13,832.88	
BD505A	HPE iLO Adv 1-svr Lic 3yr Support	3	$263.97	$791.91	4001_HPP
BD505A _0D1	Factory Integrated	3			4001_HPP
Technology RRD Gen10					
SLSW_WIN_STD _SRV_CORE	Windows Server Std Core License (2 cores)	4			
9EM-00120	*OLP WIN SVR STD CORE SNGL LIC/SA PK 2LICS NL CORE LIC*	16	$166.23	$2,659.68	
EQZFC-201	Zetafax CommsEngine Embedded Ed. 1 User/2Lines & API	2	$1,266.70	$2,533.40	
EQZFN-223	2 additional lines for local fax or SMS device	2	$747.30	$1,494.60	
BD505A	HPE iLO Adv 1-svr Lic 3yr Support	2	$264.80	$529.60	4001_HPP
BD505A _0D1	Factory Integrated	2			4001_HPP
Technology VM Gen10					
VSG-EPL-C	VMware vSphere 6 Enterprise Plus for 1 processor	8	$2,305.48	$18,443.84	
VCS6-STD-C	VMware vCenter Server 6 Standard for vSphere 6 (Per In	2	$3,786.06	$7,572.12	
SLSW_WIN_STD _SR_V_CORE	Windows Server Std CCore License (2 cores)	12			
9EM-00120	*OLP WIN SVR STD CORE SNGL LIC/SA PK 2LICS NL CORE LIC*	192	$166.23	$31,916.16	
BD5050A	HPE iLOR Adv 1-svr Lic 3yr Support	4	$259.70	$1,038.80	4001_HPP

1	BD5050A 0D1	Factory Integrated	4			4001_HPP
2	**Sublicensed Software Maintenance Total**					**$202,565.73**

D. Licensed Software Support Fee Schedule

Licensed Software Support Fee Schedule Table						
Solution Name	**Cerner Product Code**	**Inventory Quantity**	**Period One**	**Period Two**	**Period Three**	**Total**
HA Scripts for Cerner Millennium Host (per CPU)	CTPHACMP AIXSCR_02	33 CPU	$19,800.00	$20,295.00	$20,802.38	$60,897.38
HA Scripts for Millennium (per CPU)	0055908	1 CPU	$19,935.36	$20,433.74	$20,944.59	$61,313.69
Olympus Enterprise License for Level 1 clients	000969141	1	$15,262.92	$15,644.49	$16,035.61	$46,943.02
Monthly Supt for RMAN Scripts	00037326	1	$3,638.16	$3,729.11	$3,822.34	$11,189.62
Discern Expert	PS-26105S	2775 FTE	$60,623.28	$62,138.86	$63,692.33	$186,454.48
Discern Explorer	PS-26140S	2775 FTE	$34,045.92	$34,897.07	$35,769.49	$104,712.48
Enterprise Care Documentation	PS-22720S	2775 FTE	$74,852.40	$76,723.71	$78,641.80	$230,217.91
Open Engine	OE-20850S	2775 FTE	$13,928.04	$14,276.24	$14,633.15	$42,837.43
TCP/IP Communication Services	OE-22850S	2775 FTE	$4,619.64	$4,735.13	$4,853.51	$14,208.28
ATDs/Demographics Incoming	IF-29010S	2775 FTE	$2,602.80	$2,667.87	$2,734.57	$8,005.24
Billing Incoming (Quantity = 1) - QUANTITY = 4 Charges Incoming	IF-29070S	2775 FTE	$3,276.96	$3,358.88	$3,442.86	$10,078.70
Billing Incoming (Quantity = 1) QUANTITY = 4 (add'l 3)	IF-29070S	2775 FTE	$2,431.08	$2,491.86	$2,554.15	$7,477.09
Healthcare Eligibility Incoming Benefit	IF-29115S	2775 FTE	$430.80	$441.47	$452.61	$1,324.98

Licensed Software Support Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Enrollment and Maintenance						
ATDs/Demographics Outgoing	IF-29220S	2775 FTE	$1,568.76	$1,607.98	$1,648.18	$4,824.92
Results Outgoing (Discrete Data Elements)	IF-29260S	2775 FTE	$1,723.80	$1,766.90	$1,811.07	$5,301.76
Unidirectional Device Interface (Qty = 4 devices) Unidirectional Device Interface	IF-29650S	2775 FTE	$9,612.00	$9,852.30	$10,098.61	$29,562.91
Electronic Claims In	IF-29650S	2775 FTE				
Electronic Claims Out	IF-29650S	2775 FTE				
Bidirectional Device Interface (Qty = 2 devices) Bidirectional Device Interface	IF-29655S	2775 FTE	$3,413.28	$3,498.61	$3,586.08	$10,497.97
ProFit Enterprise Financials Cerner Patient Accounting Enterprise Billing & Accounting	PF-20450S	2775 FTE	$37,502.40	$38,439.96	$39,400.96	$115,343.32
Discern Expert	PF-26105S	2775 FTE	$5,676.00	$5,817.90	$5,963.36	$17,467.25
Discern Explorer	PF-26140S	2775 FTE	$2,838.00	$2,908.95	$2,981.67	$8,728.62
Enterprise Clinical Data Repository	PS-20570S	2775 FTE	$150,408.00	$154,168.20,	$158,022.41	$462,598.61
Unanticipated maintenance and support service related needs (reference Exhibit A, V.A.1.a.1., V.A.1.b.6., and V.A.1.c.1.).			$146,244.96	$146,244.96	$146,244.96	$438,734.88
Multimedia Foundation Base Services- Imaging	PV-22196S	Each	$17,096.04	$17,523.44	$17,961.53	$52,581.01

Licensed Software Support Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Clinical Office	PV-20229LS	2775 FTE	$220,496.64	$226,009.06	$231,659.28	$678,164.98
Discern Expert	PV-26105S	2775 FTE	$14,294.88	$14,652.25	$15,018.56	$43,965.69
Discern Explorer	PV-26140S	2775 FTE	$5,106.48	$5,234.14	$5,365.00	$15,705.62
General Laboratory	PA-20070S	2775 FTE	$13,652.16	$13,993.46	$14,343.30	$41,988.92
Microbiology	PA-20075S	2775 FTE	$10,239.12	$10,495.10	$10,757.48	$31,491.69
Cerner Knowledge Index (HNA Millennium) (Qty = 1 production environment)	PA-20090-S2	2775 FTE	$2,327.04	$2,385.22	$2,444.85	$7,157.10
Outreach Service	PA-22205S	2775 FTE	$4,757.52	$4,876.46	$4,998.37	$14,632.45
Laboratory Management (HNA Millennium)	PA-24110_AMT	2775 FTE	$10,239.12	$10,495.10	$10,757.48	$31,491.69
Advanced Pricing	PA-25100S	2775 FTE	$2,740.80	$2,809.32	$2,879.55	$8,429.67
Departmental Billing	PA-25110S	2775 FTE	$6,826.08	$6,996.73	$7,171.65	$20,994.46
Departmental Materials Management	PA-25200S	2775 FTE	$3,413.04	$3,498.37	$3,585.83	$10,497.23
Discern Expert	PA-26105S	2775 FTE	$8,170.56	$8,374.82	$8,584.19	$25,129.58
Discern Explorer	PA-26140S	2775 FTE	$4,757.52	$4,876.46	$4,998.37	$14,632.35
Siemens Advia Centaur (Bi-dir)	MD-BY76S	2775 FTE	$1,271.76	$1,303.55	$1,336.14	$3,911.46
Abbott Architect i1000 (BiDir)	MD-AB64_AMT	2775 FTE	$1,346.64	$1,380.55	$1,414.81	$3,911.46
Roche AmpliLink 3.0.1 (M	MD-RO83-S2	2775 FTE	$2,509.08	$2,571.81	$2,636.10	$7,716.99
GenProbe Panther System Bi-dir w/ barcodes	MD-GP20S_AMT	2775 FTE	$4,662.00	$4,778.55	$4,898.01	$14,338.56
Enterprise Registration Management	CP-20735S	2775 FTE	$46,331.88	$47,490.18	$48,677.43	$142,499.49

Second Amendment
Cerner Corporation

81 of 106

MA-042-18010399

HCA ASR 19-000679

Page 81 of 106

Licensed Software Support Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Cerner Registration Management						
Enterprise Scheduling Management Cerner Scheduling Management	CP-20740S	2775 FTE	$30,177.48	$30,931.92	$31,705.21	$92,814.61
Enterprise Master Person Index	CP-20745S	2775 FTE	$26,740.44	$27,408.95	$28,094.17	$82,243.57
Discern Expert	CP-26105S	2775 FTE	$13,352.88	$13,686.70	$14,028.87	$41,068.45
Discern Explorer	CP-26140S	2775 FTE	$6,736.92	$6,905.34	$7,077.98	$20,720.24
Clinical Documents Medical Document Management	IF-29083S_AMT	300 FTE	$84.00	$86.10	$88.25	$258.35
Orders Outgoing (with statuses)	IF-29230S	300 FTE	$84.00	$84.00	$84.00	$252.00
Orders Outgoing (with statuses)	IF-29230S	300 FTE	$588.00	$602.70	$617.77	$1,808.47
Enterprise Eligibility M	CP-20750S	2775 FTE				
Doctor Update Incoming	IF-29040S	2775 FTE				
Results Incoming (Discrete)	IF-29050S	2775 FTE	$2,988.00	$3,062.70	$3,139.27	$9,189.97
Healthcare Eligibility/B	IF-29405S	2775 FTE				
PowerVision	OM-20600S	1	$19,500.00	$19,987.50	$20,487.19	$59,974.69
Enterprise Order Management	PS-20575S	2775 FTE	$57,262.32	$58,693.88	$60,161.22	$176,117.42
Cerner Knowledge Index	PS-22090-S2	1 PROD domain	$1,620.00	$1,660.50	$1,702.01	$4,982.51
CareAware MultiMedia - Digital Objects	MM-22260S	500 GB	$10,200.00	$10,455.00	$10,716.38	$31,371.38
CareAware MultiMedia - Digital Objects	MM-22260S_AMT	500 GB	$10,629.96	$10,895.71	$11,168.10	$32,693.77

Second Amendment
Cerner Corporation
82 of 106
MA-042-18010399
HCA ASR 19-000679
Page 82 of 106

Licensed Software Support Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Cerner Health Information Management	MR-20400S_AMT	850 Users	$26,004.84	$26,654.96	$27,321.34	$79,981.14
Connect to Cerner Health: Send to Cerner Health M Page	PY-28010	1				
DR Millenium Toolkit	CTP-DRTOOLKIT_AMT	1 PROD domain	$21,145.32	$21,673.95	$22,215.80	$65,035.07
P2Sentinel Enterprise 12 Cores	CTM-P2S-ENT-1_AMT	12 cores	$11,724.72	$12,017.84	$12,318.28	$36,060.84
PowerInsight Explorer	PI-20611S_AMT	1 PROD domain	$31,308.72	$32,091.44	$32,893.72	$96,293.88
SAP Business Objects Runtime License for PowerInsight	PI-20701S_AMT	1	$11,724.72	$12,017.84	$12,318.28	$36,060.84
Mpages Development ToolKit	PS-22700S_AMT	188,000 OP visits	$29,760.00	$30,504.00	$31,266.60	$91,530.60
Cerner Health Information Management	MR-20400S_AMT	595 FTE	$7,488.00	$7,675.20	$7,867.08	$23,030.28
Cerner Health Information Management	MR-20400S_AMT		$9,984.00	$10,233.60	$10,489.44	$30,707.04
PowerChart Ambulatory	PV-20230S_AMT	15 Providers	$5,196.00	$5,325.90	$5,459.05	$15,980.95
Mpages Development Toolkit	PS-22700S_AMT	62,000 OP Visits	$11,904.00	$12,201.60	$12,506.64	$36,612.24
AMT_SUPT: Departmental Document Imaging Archive Lab	MM-22358S_AMT	3 Devices	$1,656.00	$1,697.40	$1,739.84	$5,093.24
Lab Imaging	PA-22244_AMTS	3 Devices	$1,656.00	$1,697.40	$1,739.84	$5,093.24
Support	January 2018 invoice		$93,279.32			$93,279.32

Second Amendment
Cerner Corporation
83 of 106
MA-042-18010399
HCA ASR 19-000679
Page 83 of 106

Licensed Software Support Fee Schedule Table						
Solution Name	**Cerner Product Code**	**Inventory Quantity**	**Period One**	**Period Two**	**Period Three**	**Total**
BioFire Film Array Uni-Dir Gen Lab	Traditional Medical Device Interface	1 Device	$50.00	$615.00	$630.38	$1,295.38
Dynex DS2/DSX (Bidir)	Traditional Medical Device Interface	1 Device	$93.00	$1,143.90	$1,172.50	$2,409.40
Licensed Software Support Grand Total			**$1,437,611.56**	**$1,375,896.75**	**$1,406,638.04**	**$4,220,146.35**

E. Equipment Maintenance Fee Schedules

    1. Equipment Maintenance Fee Schedule Table

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	**Cerner Product Code**	**Inventory Quantity**	**Period One**	**Period Two**	**Period Three**	**Total**
HP Integrity rx8640 8-core	AB443A	2	$40,584.00			$40,584.00
HP Integrity rx6600 Rack 4-way - 4 x Itanuim 2 - SA MNT: HP Integrity rx6600 - Rac	AD134A	2	$26,479.80			$26,479.80
HP M6412-A Fibre Channel Drive Enclosure MNT: HP M6412-A Fibre Channel	AG638B	8	$3,744.00			$3,744.00
HP EVA M6412A 300GB 15K FC Drive MNT: HP EVA M6412A 300GB 15K F	AG690B	24	$2,016.00	$2,016.00	$2,016.00	$6,048.00

Second Amendment
Cerner Corporation

84 of 106

MA-042-18010399

HCA ASR 19-000679

Page 84 of 106

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
HP MSL6030 1 LTO-4 Ultrium 1840 FC Lib MNT: HP MSL6030 1 LTO-4 Ultriu	AJ030A	1	$2,676.00			$2,676.00
HP 8/40 Base 24 ports Enabled SAN Switch	AM869A	2	$7,581.60	$7,581.60	$7,581.60	$22,744.80
HP StorageWorks DAT 160 Array Module	Q1575A	6	$1,440.00			$1,440.00
DL380 G5 Base Storage Server MNT: DL380 G5 Base Storage Ser	AG815B	1	$1,056.00			$1,056.00
MNT: HP BLc7000 CTO 3 IN LCD R	507019-B21	2	$1,440.00	$1,440.00	$1,440.00	$4,320.00
MNT: Special Order- BL460C G6 C	507864-B21	22	$7,920.00	$7,920.00	$7,920.00	$23,760.00
HP B-Series 8/40 SAN Switch Su	HA110A59LK	2	$1,296.00	$1,296.00	$1,296.00	$3,888.00
P6500 EVA Dual Controller Arra	HA110A5Q24	1	$504.00	$504.00	$504.00	$1,512.00
P6300/P6500 Drive Enclosure 5	HA110A5Q25	20	$2,400.00	$2,400.00	$2,400.00	$7,200.00
P6300/P6500 HDD Support 5yr HW	HA110A5Q26	96	$3,456.00	$3,456.00	$3,456.00	$10,368.00
MNT: HP - Rack stabilizer opti	AF062A	1				
MNT: HP 10K G2 600W Hvy Dty V2	AF065A	1				
MNT: HP EVA6400 Dual Controlle	AJ757A	1	$2,100.00	$2,100.00	$2,100.00	$6,300.00

Second Amendment
Cerner Corporation
85 of 106
MA-042-18010399
HCA ASR 19-000679
Page 85 of 106

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
MNT: HP Low Power kit - Memory	461828-B21	1				
MNT: PCI-X 2.0 1Port 4Gb Fibre	AB378B	1				
MNT: Processor upgrade - 1 x I	458575-B21	1				
MNT: Compaq - Power distributi	252663-D72	2				
MNT: HP - Rack side panel - me	AF054A	2				
MNT: HP FC1142SR - HBA - PCI E	AE311A	2				
MNT: HP Integrity DVD-ROM Driv	AD142A	2				
MNT: HP Integrity Redundant Po	AD052A	2				
MNT: HP Integrity Upgraded Cor	AD044A	2				
MNT: HP Integrity rx6600 FIO I	AD296A	2				
MNT: HP Integrity rx7640/rx864	AB313A	2				
MNT: HP rx36xx/66xx Internal S	AB036B	2				
MNT: HP rx6600 48-DIMM Memory	AD127A	2				
MNT: HotSwap Power Supply for	A6099A	2				

Second Amendment
Cerner Corporation
86 of 106
MA-042-18010399
HCA ASR 19-000679
Page 86 of 106

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
MNT: PDU 60A, 200-240V N. Am F	E7683AZ	2				
MNT: HP - SCSI external cable	C2362B	3				
MNT: HP - SCSI external termin	C2364A	3				
MNT: HP Rack 10642 G2 Shock Pa	AF002A	3				
MNT: 16A High Voltage mPDU WW	252663-B24	4				
MNT: HP - Hard drive - 146 GB	AD333A	4				
MNT: HP rp74/84, rx76/86 DVD+R	AB351B	4				
MNT: HP rx76/86 iCAP 1.6G 18MB	AD366A	8				
MNT: HP rx76/86,rp74/84 146GB	AD210A	8				
MNT: HP COMBO PCI-x 2p 4Gb FC	AD194A	12				
MNT: HP PCI-X 2p 1000BT, 2p U3	XAB290A	12				
MNT: HP - Memory - 8 GB (4 x	AB565A	16				
MNT: HP Servers 8GB DDR2 Memor	AB455A	24				
MNT: HP - Fibre Channel cable	221692-B23	38				
MNT: HP Tape Array 5300 Factor	C7508BZ	2				

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
MNT: HP 8/40 Base 24-ports Ena	AM869A	1				
MNT: HP BLc7000 1 PH FIO Power	413379-B21	2				
MNT: HP BLc7000 DDR2 Encl Mgmt	456204-B21	2				
MNT: Cisco Catalyst 3120G Blad	451438-B21	4				
MNT: HP Active Cool Fan - Fan	412140-B21	12				
MNT: HP X5560 BL460c G6 FIO Ki	507792-L21	22				
MNT: Processor upgrade - 1 x I	507792-B21	22				
MNT: HP SFF ENT - 3G - 146GB -	504062-B21	44				
MNT: HP - Memory - 1x2GB - 2Rx	500656-B21	88				
HP 5y Support Plus 24 SVC	HA110A5	1				
HP 5y Support Plus 24 SVC	HA110A5	1				
MNT: PowerMic II Non-Scanner M	0POWM2N-D04	15	$1,209.00	$1,209.00	$1,209.00	$3,627.00
PowerMic II NonScanner Microp	0POWM2N-A04	15	$1,144.80	$1,144.80	$1,144.80	$3,434.40
Zetafax CommsEngine Premium Suppt Embedded Ed. 1 YR	EQZFC-819	2	$0	$572.40	$572.40	$1,144.80

Second Amendment
Cerner Corporation

88 of 106

MA-042-18010399

HCA ASR 19-000679

Page 88 of 106

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Support for TR1034 Fax Board Analog 4 Channel	EQZF-01702-1S	2	$0	$900.12	$900.12	$1,800.24
Linux Equipment						
HP 5Y 4 hr 24 x 7 w DMR Proactive Care SVC	H1K93A5	1	$0	$0	$0	$0
HP ProLiant DL380 Gen9 Support 5 yr	H1K93A5 WAH	1	$0	$0	$0	$0
HP 3Y 4 hr 24x7 w DMR Proactive Care SVC	H1K93A3	1	$0	$0	$0	$0
HP ProLiant DL580 Gen10 Support	H1K93A3 ZBM	2	$0	$0	$2,494.44	$2,494.44
HPE DL380 Gen10 Support	H1K93A3 WAH	5	$0	$0	$3,381.84	$3,381.84
HPE ProLiant DL580 Gen10 Support	H1K93A3 ZBM	2	$0	$0	$2,494.44	$2,494.44
HPE DL380 Gen10 Support	H1K93A3 WAH	5	$0	$0	$3,381.84	$3,381.84
HPE 5Y Proactive Care 24x7 wDMR Service MSA 2050 Storage Spt - 60 months	H1K93A5 RC0	1	$0	$0	$0	$0
HPE 5Y ProactiveCare 24x7 wDMR Svc MSA 2050 DiskEnclosureSpt 60 months	H1K93A5 RC2	2	$0	$0	$0	$0
HP 5Y 4hr 24 x 7 w DMR Proactive Care SVC	H1K93A5	1	$0	$0	$0	$0
MSL4048 Library Support	H1K93A5 80K	1	$0	$0	$0	$0
HPE SVT 380 Gen10 Node 1 Node Support	H1K92A3 Z9X	2	$0	$0	$1,238.64	$1,238.64

Second Amendment
Cerner Corporation
89 of 106
MA-042-18010399
HCA ASR 19-000679
Page 89 of 106

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	**Cerner Product Code**	**Inventory Quantity**	**Period One**	**Period Two**	**Period Three**	**Total**
HP 3Y 4 hr 24x7 Proactive Care SVC-36 months	H1K92A3	1	$0	$0	$0	$0
3YR SNTC 24X7X4OS Nexus 9300 with 48p 10G BASE-T and 6p 10	CON-3CON-3OSP-93108TCX	2	$0	$0	$3,471.84	$3,471.84
3YR SNTC 24X7X4OS Catalyst 3850 48 Port Data IP Base	CON-3OSP-WSC388TS	2	$0	$0	$2,117.04	$2,117.04
HPE 5Y Proactive Care 24x7 wDM	H1K92A3 WAH	1	$0	$0	$0	$0
HPE SN6000B 16Gb 48/24 FC Swit	H1K92A3 QAM	2	$0	$0	$1,656.60	$1,656.60
Fi-7160 Document Scanner	PA03670-B085	3	$0	$0	$0	$0
SAN						
HPE NS 4x16Gb FC 2p Adptr Supp 24x7 M-Su 4 HR	HT6Z3A1 ZGC	2	$429.00	$1,716.00	$1,716.00	$3,861.00
HPE NS HF40/60 23.04TB Cache Bndl Supp 24z7 M-Su 4 HR	HT6Z3A1 ZFC	2	$1,248.00	$4,992.00	$4,992.00	$11,232.00
HPE NS HF40/60 ES3 210TB 17TB Shelf Supp 24z7 M-Su 4 HR	HT6Z3A1 ZFV	2	$1,452.00	$5,808.00	$5,808.00	$13,068.00
HPE NS HF40/60 Hybr 210TD HDD Bndl Supp 24z7 M-Su 4 HR	HT6Z3A1 ZFW	2	$1,524.00	$6,096.00	$6,096.00	$13,716.00
HPE NS HF40/60 Hybr id Base Array Supp 24z7 M-Su 4 HR	HT6Z3A1 ZFK	2	$1,890.00	$7,560.00	$7,560.00	$17,010.00

Equipment Maintenance Fee Schedule Table						
Equipment listed below in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX Go-Live						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Additional unanticipated Equipment Maintenance or other maintenance and support service related needs, (reference Exhibit A, V.A.1.a.2., V.A.1.b.7.a., and V.A.1.c.2.).			$10,000.00	$10,000.00	$10,000.00	$30,000
Equipment Maintenance Grand Total			$ 123,588.76	$ 68,710.48	$88,956.64	$ 281,255.88

2.   Pre-Paid Equipment Maintenance Fee Schedule Table – The parties agree the following Equipment Maintenance is purchased in advance, pursuant to the terms identified in Subparagraph A.1.a.7.b of Exhibit A to the Agreement, and that such Equipment Maintenance is for the terms identified below:

Pre-Paid Equipment Maintenance Fee Schedule Table					
Solution Name	Cerner Product Code	Initial Term (mo)	Inventory Quantity	Period One	Total
Brocade SN600B (2) w_48GB 3yr					
HP 3Y 24x7 Proactive Care SVC	H1K92A3	36	1	$0	$0
HPE SN6600B 32Gb 48/48 PP Switch Support	H1K92A3 ZHZ	36	2	$13,461.69	$13,461.69
Technology Cisco 9800 Switches					
3 YR SNTC 24X7X4OS Nexus 9300 with 48p 10G BASE-T and 6p 10	CON-30SP-93108TCX	36	2	$5,130.72	$5,130.72
CON-3ECMU-N93LAN	CON-3ECMU-N93LAN	36	2	$1,352.73	$1,352.73

Second Amendment
Cerner Corporation
91 of 106
MA-042-18010399
HCA ASR 19-000679
Page 91 of 106

Pre-Paid Equipment Maintenance Fee Schedule Table					
Solution Name	**Cerner Product Code**	**Initial Term (mo)**	**Inventory Quantity**	**Period One**	**Total**
Technology CAMM Gen10					
Red Hat Enterprise Linux Server Premium (1 socket-1VG)	RH0154946	12	2	$465.55	$465.55
Red Hat Enterprise Linux Server Premium (1 socket-1VG)	RH0154946	12	2	$465.55	$465.55
HP 3Y 4hr 24X7 w DMR Proactive Care SVC	H1K93A3	36	1	$0	$0
HPE iLO Advanced Non Blade-3yr Support	H1K93A3 R2M	36	4	$49.19	$49.19
HPE 3YR DL360 Gen10 Proactive Care Support 24x7 wDMR	H1K93A3 WAG	36	4	$5,887.53	$5,887.53
HP 3Y 4hr 24x7 xDMR Proactive Care SVC	H1K93A3	36	1	$0	$0
HPE iLO Advanced Non Blade- 3yr Support	H1K93A3 R2M	36	8	$97.81	$97.81
HPE 3YR DL360 Gen 10 Proactive Care Support 24x7 wDMR	H1K93A3 WAG	36	8	$10,548.65	$10,548.65
Technology EA Gen10					
1 Year Gold Maintenance Citrix NetScaler MPX8005 Stand	4031332-EZ	12	2	$7,524.00	$7,524.00
MNT: Restricted Use-IBM WAS Network Deployment Value Unit	D55WJLL	12	1680	$0	$0
HP 3Y 4hr 24X7 x DMR Proactive Care SVC	H1K93A3	36	1	$0	$0
HPE iLO Advanced Non Blade -yr Support	H1K93A3 RTM	36	3	$36.68	$36.68

Pre-Paid Equipment Maintenance Fee Schedule Table					
Solution Name	Cerner Product Code	Initial Term (mo)	Inventory Quantity	Period One	Total
HPE 3YR DL360 Gen10 Proactive Care Support 24x7 wDMR	H1K93A3 WAG	36	3	$3,955.74	$3,955.74
Red Hat Enterprise Linux for Virtual Datacenters, Prem	RH00001F3	36	6	$52,099.85	$52,099.85
Technology RRD Gen10					
Zetafax CommsEngine Premium Suppt Embedded Ed. 1 YR	EQZFC-819	12	2	$572.40	$572.40
HP 3Y 4 hr 24x& w DMR Proactive Care SVC	H1K93A3	36	1	$0	$0
HPE iLO Advanced Non Blade – 3yr Support	H1K93A3 RTM	36	2	$24.45	$24.45
HPE 3YR DL360 Gen10 Proactive Care Support 24x7	H1K93A3 WAG	36	2	$2,637.16	$2,637.16
1 YR Support for TR1034 Fax Board Analog 4	EQZF-01702-1S	12	2	$900.12	$900.12
Technology VM Gen10					
HP 3Y 4 hr 24x& w DMR Proactive Care SVC	H1K93A3	36	1	$0	$0
HPE iLO Advanced Non Blade – 3yr Support	H1K93A3 RTM	36	4	$48.91	$48.91
HPE 3YR DL360 Gen10 Proactive Care Support 24x7	H1K93A3 WAG	36	4	$5,274.32	$5,274.32
Prepaid Equipment Maintenance				**$110,533.05**	**$110,533.05**

F.   Subscription Services Fee Schedule

Subscription Services Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Visit Manager for Enterprise (powered by IMH)	AQ-60123	301 Users	$14,399.88	$14,759.88	$15,128.87	$44,288.63

Second Amendment
Cerner Corporation
93 of 106
MA-042-18010399
HCA ASR 19-000679
Page 93 of 106

Subscription Services Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
HealthSentry Data Services	KS-26748	3 Data Feeds	$39,000.00	$39,975.00	$40,974.38	$119,949.38
Current Procedure Terminology (CPT)	KS-22092L	600 Users	$0	$0	$0	$0
Cerner Workflow Authentication	CTP-CERNWORKFLOWC	90 Users	$14,040.00	$14,391.00	$14,750.78	$43,181.78
Subscription Services Grand Total			**$67,439.88**	**$69,125.88**	**$70,854.02**	**$207,419.78**

G. Application Services Provider (ASP) Fee Schedule

Application Services Provider (ASP) Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Cerner ePrescribe Package	PS-20080-ASP	60 Providers	$15,000.00	$15,375.00	$15,759.38	$46,134.38
Cerner Patient Portal-HealtheLife	PY-27580-PKG	301 Users	$30,000.00	$30,750.00	$31,518.75	$92,268.75
Connect to Cerner Health Trusted Contributor		1				
Cerner Direct HISP-Ambulatory	PY-70126C	41 Facilities	$22,140.00	$22,693.50	$23,260.84	$68,094.34
Cerner Direct HISP-Ambulatory	PY-70126C	1 Facility	$540.00	$553.50	$567.34	$1,660.84
HealtheLife	PY-27800C	1 client	$13,500.00	$13,837.50	$14,183.44	$41,520.94
Cerner ePrescribe Package	PS-20080-ASP	15 Providers	$4,500.00	$4,612.50	$4,727.81	$13,840.31
Ignite Millennium API	PY-70126C	8750 API Calls	$15,756.00	$16,149.90	$16,553.65	$48,459.55
P2Sentinel-Security as a Service	P2S-SEC-SRV-PKG		$41,670.00	$51,254.10	$52,535.45	$145,459.55
Application Services Provider (ASP) Grand Total			**$143,106**	**$155,266**	**$159,106.65**	**$457,438.65**

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H. Shared Computing Services Fee Schedule

Shared Computing Services Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
DM One, Term, User License, Upgrade from DMNE	DMONE-UPG-TERM	2 GB Per Day				
Pass-Through Code: 100021			$13,740.00	$16,900.20	$17,322.71	$47,962.91
Shared Computing Services Grand Total			**$13,740.00**	**$16,900.20**	**$17,322.71**	**$47,962.91**

I. Managed Services Fee Schedule

Managed Services Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Disaster Recovery Recurring Fees (CONTRACTOR Hosted)	CTS-DRRECUR	300 CCU	$325,670.28	$333,812.04	$342,157.34	$1,001,639.65
DR Millennium Toolkit	CTP-DRTOOLKIT	1				
Managed Services Grand Total			**$325,670.28**	**$333,812.04**	**$342,157.34**	**$1,001,639.65**

J. Application Management Services Fee Schedule

Application Management Services						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Application Management Services		1	$535,140.00	$548,518.50	$562,231.46	$1,645,889.96
Application Management Services Grand Total			**$535,140.00**	**$548,518.50**	**$562,231.46**	**$1,645,889.96**

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Second Amendment
Cerner Corporation

MA-042-18010399

K. Transaction Services Fee Schedule

Transaction Services Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Transaction Services	RC-20325-MIN	12,000 Eligibility requests monthly	$34,560.00	$35,424.00	$36,309.60	$106,293.60
Overage Charge at 25 cents each - Set aside funds for overage (4,000 additional requests per year)	TSEDI-ELIG-BILL	25 cents a transaction over 12,000 transactions monthly	$1,000.00	$1,000.00	$1,000.00	$3,000.00
Cerner Address Validation	RC-20331					
Cerner Eligibility and Benefits Verification Transaction	RC-20325-TRANS					
Cerner Eligibility and Benefits Submitter Setup Fee	RC-20325-STUP	14 Submitter ID's				
Cerner Eligibility and Benefits Verification Setup Fee	RC-20326	20 Payers				
Transaction Services Grand Total			**$35,560.00**	**$36,424.00**	**$37,309.60**	**$109,293.60**

L. Sublicensed Software Maintenance Fee Schedule

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
1 Pack Scan 25K per Month MNT: 1PK ASCENT CAPTURE V5.5-SCAN 25K PER MO	AC-1500-1300	3	$3,132.00	$3,132.00	$3,132.00	$9,396.00
1 Pack Scan 75K per Month MNT: 1PK ASCENT CAPTURE V5.5-SCAN 75K PER MO	AC-1500-1500	2	$3,432.00	$3,432.00	$3,432.00	$10,296.00
1 Pack Workstation MNT: 1PK ASCENT CAPTURE V5.5-WS	AC-1500-2000	1	$1,056.00	$1,056.00	$1,056.00	$3,168.00
MNT: 1 Pack Internet Server 75k per Month	AC-1500-3500	1	$2,244.00	$2,244.00	$2,244.00	$6,732.00

Second Amendment
Cerner Corporation

MA-042-18010399

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
MNT: APPLICATIONXTENDER IMAGE CAPTURE SERVER	456-100-425	1	$144.00	$144.00	$144.00	$432.00
MNT: APPLICATIONXTENER PROINDEX FULL TEXT CLIENT - 1 CC USE	456-100-428	1	$72.00	$72.00	$72.00	$216.00
MNT: APPLICATIONXTENER REPORTS MANAGEMENT SERVER	456-100-439	1	$1,524.00	$1,524.00	$1,524.00	$4,572.00
MNT: APPLICATIONXTENDER SERVER - 50 CC USER	456-100-468	1	$2,940.00	$2,940.00	$2,940.00	$8,820.00
MNT: APPLICATIONXTENER PROINDEX FULLTEXT SERVER	456-100-497	1	$624.00	$624.00	$624.00	$1,872.00
Oracle Processor License US:EE	QC-ORCEE-U8	8	$42,336.00	$42,336.00	$42,336.00	$127,008.00
Oracle Processor License: Full Use Appl Spec. Management Packs (Diag,Tune,CM)	QC-ORCMP-U9	8	$7,808.64	$7,808.64	$7,808.64	$23,425.92
MNT: Oracle Database ASFU US:E	QC-ORNEE-U8	150	$10,584.00	$10,584.00	$10,584.00	$31,752.00
MNT: Oracle Processor License, Full Use AS US: RAC Addon	QC-ORRAC-U9	8	$20,239.92	$20,239.92	$20,239.92	$60,719.76
MNT: Oracle ASFU Processor License, US:EE without RAC	QC-ORCEE-U8	4	$2,707.20	$2,707.20	$2,707.20	$8,121.60
IBM WebSphere MQ Value Unit License + SW Maintenance Renewal	E0256LL	400	$2,798.40	$2,798.40	$2,798.40	$8,395.20
IBM WebSphere Application Server Network Deployment VA	E025SLL	560	$4,368.00	$4,368.00	$4,368.00	$13,104.00

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
IBM Restricted use WebSphere MQ Value Unit OpenVMS Value Unit Annual SWM	E0256LL	1200	$9,316.80	$9,316.80	$9,316.80	$27,950.40
VERITAS Storage Ent Cluster 6.	UFSQFZZ 0-EI1RA	68	$1,601.04	$1,601.04	$1,601.04	$4,803.12
Oracle Named User, Fll Use Ap Sp. US:Std. Ed. One	QC-ORS1U-U9	20	$792.00	$792.00	$792.00	$2,376.00
Red Hat Enterprise Linux AS	RHLINUX -AS	4	$3,999.84	$3,999.84	$3,999.84	$11,999.52
Red Hat AS Linux License	RHLINUX -AS	4	$3,968.04	$3,968.04	$3,968.04	$11,904.12
Restricted Use - IBM WAS Network Deployment Value Unit	D55WJLL	560	$16,464.00	$16,464.00	$16,464.00	$49,392.00
Sensage Clinical Enterprise 12 core - 1 collector	SEN-CE-12	1	$26,619.96	$26,619.96	$26,619.96	$79,859.88
Red Hat Enterprise Linux ES	RHLINUX -ESB	5	$1,752.00	$1,752.00	$1,752.00	$5,256.00
Red Hat Enterprise Linux ES	RHLINUX -ESB	5	$1,733.04	$1,733.04	$1,733.04	$5,199.12
APPLICATIONXTEND ER WEB SERVICES	456-100-402	1	$1,944.00	$1,944.00	$1,944.00	$5,832.00
APPLICATIONXTEND ER SERVER - 50 CC USER	456-100-468	1	$32,400.00	$32,400.00	$32,400.00	$97,200.00
EMC AX to CAMM License 200+ Users	456-100-645_201+	1	$2,400.00	$2,400.00	$2,400.00	$7,200.00
APPLICATIONXTEND ER WEB SERVICES	456-100-402	1	$1,944.00	$1,944.00	$1,944.00	$5,832.00
AX to CAMM 1-25	456-100-645_1-25	1	$979.20	$979.20	$979.20	$2,937.60
APPLICATIONXTEND ER WEB SERVICES	456-100-402	1	$1,944.00	$1,944.00	$1,944.00	$5,832.00
APPLICATIONXTEND ER SERVER - 250 CC USER	456-100-471	1	$42,184.80	$42,184.80	$42,184.80	$126,554.40
APPLICATIONXTEND ER SERVER - 10 CC USER	456-100-466	1	$7,200.00	$7,200.00	$7,200.00	$21,600.00
Cerner eSignature Facility License	CTESIG-FAC	3	$3,240.00	$3,240.00	$3,240.00	$9,720.00

98 of 106

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Cerner eSignature Facility License	CTESIG-FAC	1	$40,800.00	$40,800.00	$40,800.00	$122,400.00
Lexmark Document Distributor Server License	43C0097-CRESG	1	$2,035.20	$2,035.20	$2,035.20	$6,105.60
Restricted Use - IBM MQ Value Unit License + SW Maintenance	D55V1LL	400	$4,704.00	$4,704.00	$4,704.00	$14,112.00
HP-UX 11i HAOE Integ 4Skt/4Core PSA 5yr Supp	HA110A51X2	8	$17,360.52			$17,360.52
HP-UX 11i v2 Serviceguard RAC PCL LTU MNT: HP-UX 11i v2 Serviceguard	T1907BA-UD	4	$1,440.00			$1,440.00
HP-UX 11i v3 Data Center OE LTU MNT: HP-UX 11i v3 Data Center	BA931AC-UD	6	$5,184.00			$5,184.00
HP-UX 11i v2 Serviceguard RAC PCL LTU MNT: HP-UX 11i v2 Serviceguard	T1907BA-PS	4	$2,016.00			$2,016.00
HP-UX 11i v3 Data Center OE LTU MNT: HP-UX 11i v3 Data Center	BA931AC-PS	6	$6,840.00			$6,840.00
Command View P6500 EVA Unlimit	HA110A5Q1Y	1	$1,266.96	$1,266.96	$1,266.96	$3,800.88
MNT: HP-UX 11i v3 Data Center	BA931AC-PS	2	$1,896.00			$1,896.00
MNT: HP-UX 11i v2 Serviceguard	T1907BA-PS	4	$1,440.00			$1,440.00
MNT: HP-UX 11i v2 Serviceguard	T1907BA-UD	4	$1,440.00			$1,440.00
MNT: HP-UX 11i v2 Serviceguard	T1907BA-PS	8	$2,880.00			$2,880.00
MNT: HP-UX 11i v2 Serviceguard	T1907BA-PS	8	$2,880.00			$2,880.00
MNT: HP-UX 11i v2 Serviceguard	T1907BA-UD	8	$2,880.00			$2,880.00
MNT: HP-UX 11i v2 Serviceguard	T1907BA-UD	8	$2,880.00			$2,880.00
MNT: HP-UX 11i v3 Data Center	BA931AC-PS	8	$7,584.00			$7,584.00

Second Amendment
Cerner Corporation

99 of 106

MA-042-18010399

HCA ASR 19-000679

Page 99 of 106

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
MNT: HP-UX 11i v3 Data Center	BA931AC-PS	8	$7,584.00			$7,584.00
MNT: HP-UX 11i v3 Data Center	BA931AC-PS	8	$7,584.00			$7,584.00
MNT: HP-UX 11i v3 Data Center	BA931AC-UD	8	$7,584.00			$7,584.00
MNT: HP-UX 11i v3 Data Center	BA931AC-UD	8	$7,584.00			$7,584.00
MNT: HP-UX 11i v3 Data Center	BA931AC-UD	8	$7,584.00			$7,584.00
MNT: HP Command View EVA6400 U	TA646A-PS	1	$2,340.00	$2,340.00	$2,340.00	$7,020.00
MNT: HP Command View EVA6400 U	TA646A-UD	1	$3,516.00	$3,516.00	$3,516.00	$10,548.00
MNT: Oracle Named User, Full U	QC-ORRAA-U9	200	$7,800.00	$7,800.00	$7,800.00	$23,400.00
DM360 Ntwk Ed, Perp, Phys Clie	DMNEP-CLT-0250	15	$6,597.00	$6,597.00	$6,597.00	$19,791.00
MNT: DM360 Ntwk Ed, Perp, Phys	DMNEP-CLT-0250	25	$9,897.00	$9,897.00	$9.897.00	$29,691.00
MNT: 1 concurrent station (sta	AE#T024-001U-CER	3	$1,728.00	$1,728.00	$1,728.00	$5,184.00
MNT: 1 concurrent station (sta	AE#T024-001U-CER	3	$1,728.00	$1,728.00	$1,728.00	$5,184.00
APPLICATIONXTENDER PACKAGE - 2	457-100-246	1	$11,700.00	$11,700.00	$11,700.00	$35,100.00
MNT: Oracle Database ASFU US:E	QC-ORNEE-U8	50	$1,950.00	$1,950.00	$1,950.00	$5,850.00
MNT: Image vol 600K/yr(standar	AE#Y024-600K-CER	1	$1,263.96	$1,263.96	$1,263.96	$3,791.88
MNT: Image vol 600K/yr(standar	AE#Y024-600K-CER	1	$1,263.96	$1,263.96	$1,263.96	$3,791.88
MNT: Oracle Proc. Lic, Fll Use	QC-ORS1P-U9	1	$1,275.96	$1,275.96	$1,275.96	$3,827.88
APPLICATIONXTENDER PACKAGE - 5	457-100-245	3	$2,340.00	$2,340.00	$2,340.00	$7020.00
MNT: Restricted Use - IBM MQ V	D55V1LL	3,200	$22,272.00	$22,272.00	$22,272.00	$66,816.00
MNT: Nuance Management Server	DMNE-NMS-F20	1	$2,160.00	$2,160.00	$2,160.00	$6,480.00
MNT: VMware Infrastructure Ent	VI-ENT-C	1	$0	$0	$0	$0
For HP Internal Entitlement Pu	HA110A5699	32	$0	$0	$0	$0
MNT: Cerner eSignature per Cli	CT-ESIG-CLIN	3	$3,240.00	$3,240.00	$3,240.00	$9,720.00

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Linux Database						
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU- 36 months- 1	G3J30A	4	$0	$0	$3,151.56	$3,151.56
Factory Integrated	G3J30A 0D1	4	$0	$0	$0	$0
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU- 36 months	G3J30A	4	$0	$0	$3,151.56	$3,151.56
Factory Integrated	G3J30A 0D1	4	$0	$0	$0	$0
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU (36 months)	G3J30A	1	$0	$0	$787.92	$787.92
Factory Integrated	G3J30A 0D1	1	$0	$0	$0	$0
MNT: Oracle Database ASFU US:EE-Named User Plus Perpetual-	QC-ORNEE-U8	350	$73,150.20	$73,150.20	$73,150.20	$ 219,450.60
MNT: Oracle Processor License, ASFU US:RAC	QC-ORRAC-U9	4	$20,240.04	$20,240.04	$20,240.04	$60,720.12
Oracle ASFU Diagnostic Pack per Proc	QC-ORADPEE-U9	4	$6,600.00	$6,600.00	$6,600.00	$19,800.00
Oracle ASFU Tuning Pack per Proc	QC-ORATPEE-U9	4	$4,400.04	$4,400.04	$4,400.04	$13,200.12
Linux Application						
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU 36 months	G3J30A	2	$0	$0	$1,575.72	$1,575.72
Factory Integrated	G3J30A 0D1	2	$0	$0	$0	$0
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU (36 months)	G3J30A	4	$0	$0	$3,151.56	$3,151.56
Factory Integrated	G3J30A 0D1	4	$0	$0	$0	$0
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU (36 months)	G3J30A	4	$0	$0	$3,151.56	$3,151.56
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 LTU (36 months)	G3J30A	1	$0	$0	$787.92	$787.92

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Restricted Use - IBM MQ Value Unit License + SW M (Initial term 12 months-extended term 14 months)	D55V1LL	2100	$37,905.84	$37,905.84	$ 37,905.84	$113,717.52
RHEL Svr 2 Sckt/2 Gst 3yr 24x7 SW SVC (36 months)	G3J30A	1	$0	$0	$787.92	$787.92
Factory Integrated	G3J30A 0D1	1	$0	$0	$0	$0
Tech-EPCS						
CID-EPCS-Cwkflow-RemoteAccess (25-199)	CID-EPCS-CW-RA-25	90	$4,320.00	$ 4,320.00	$4,320.00	$12,960.00
Cloud Applicance						
VMware vSphere 6 Enterprise Plus for 1 processor-26 months	VS6-EPL-C	4	$3,843.84	$ 3,843.84	$3,843.84	$11,531.52
Lab Imaging						
MNT:APPLICATIONX TENDER PACKAGE – 5 CC USER PACK	456-108-462	1	$2,340.00	$ 2,340.00	$2,340.00	$7,020.00
Linux items moved from prepaid in Amendment 1						
HPE iLO Advanced Non Blade 3 yr support	H1K93A5 R2M	1			$6.48	$6.48
HPE iLO Advanced Non Blade -3yr Support	H1K93A3 R2M	7			$37.92	$37.92
HP RH Svr 2 Sckt/2 Gst 3yr 24x7 SW SVC	H1K93A3 T75	7			$1,199.28	$1,199.28
HPE RH Svr 2 Sckt/2 Gst 3yr 24	H1K93A3 T75	9			$964.56	$964.56
iLO Advanced Non Blade - 3yr S	H1K92A3 R2M	2			$10.08	$10.08
HPE iLO Advanced Non Blade -3yr Support	H1K93A3 R2M	7			$37.92	$37.92
HPE OmniStack 8-14c 1P Small Support	H1K92A3 ZA0	2	$0	$0	$0	$0
New items						
INFOSCALE ENTERPRISE LNX 1 CORE ONPREMISE STANDARD PER	11943-M1	24	$6,727.44	$6,727.44	$6,727.44	$20,182.32

Second Amendment
Cerner Corporation
102 of 106
MA-042-18010399
HCA ASR 19-000679
Page 102 of 106

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Oracle Standard Edition One DB, ASFU, Named User Lic	QC-ORS1P-U9	1	$1,275.96	$1,275.96	$1,275.96	$3,827.88
Red Hat Enterprise Linux Server Premium (1 socket-1VG)	RH0154946	2		$974.64	$974.64	$1,949.28
INFOSCALE ENTERPRISE LNX 1 CORE ONPREMISE STANDARD PER	11943-M1	24	$6,727.44	$6,727.44	$6,727.44	$20,182.32
Red Hat Enterprise Linux Server Premium (1 socket-1VG)	RH0154946	2		$974.64	$974.64	$1,949.28
Oracle Standard Edition One DB, ASFU, Named User Lic	QC-ORS1P-U9	30	$1,188.00	$1,188.00	$1,188.00	$3,564.00
VMware vSphere 6 Enterprise Plus for 1 processor	VX6-EPL-C	16	$15,375.36	$15,375.36	$15,375.36	$46,126.08
Gold Maintenance Citrix NetScaler MPX8005 Stand	4031332-EZ	2	$0	$9,000.00	$9000.00	$18,000
MNT:Restricted Use-IBM WAS Network Deployment Value Unit	D55WJLL	1680	$0	$78,456.72	$78,456.72	$156,913.44
VMware vSphere 6 Enterprise Plus for 1 processor	VX6-EPL-C	6	$5,765.76	$5,765.76	$5,765.76	$17,297.28
Zetafax CommsEngine Premium Suppt Embedded Ed	EQZFC-819	2	$0	$572.40	$572.40	$1,144.80
Support for TR1034 Fax Board- Analog 4 Channel	EQZF-01702-1S	2	$0	$900.12	$900.12	$1,800.24
VMware vSphere 6 Enterprise Plus for 1 processor	VS6-EPL-C	8	$7,687.68	$7,687.68	$7,687.68	$23,063.04
VMware vCenter Server 6 Standard for vSphere 6 (Per In	VCS6-STD-C	2	$3,396.84	$3,396.84	$3,396.84	$10,190.52
Additional unanticipated Sublicensed Software Maintenance or other maintenance and support service related needs, (reference Exhibit A, V.A.1.a.7., V.A.1.b.12.), and V.A.1.c.7.).			$28,600.00	$28,600.00	$28,600.00	$85,800.00

Second Amendment
Cerner Corporation

103 of 106

MA-042-18010399

HCA ASR 19-000679

Page 103 of 106

Sublicensed Software Maintenance Fee Schedule Table						
Sublicensed Software Maintenance items that are in bold font with highlighted rows will be removed from Maintenance within sixty (60) calendar days after LINUX system is in production						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Sublicensed Software Maintenance Grand Total			$717,327.88	$713,565.16	$732,367.84	$2,163,260.88

M. Term Licensed Software Fee Schedule

Term Licensed Software Fee Schedule Table						
Solution Name	Cerner Product Code	Inventory Quantity	Period One	Period Two	Period Three	Total
Term License Fees						
Cerner CMT (Enterprisewide) CMT	KS-22091L	1 Enterprise	$10,135.20	$10,388.58	$10,648.29	$31,172.07
Ambulatory Content Package	KS-26982L	15 Providers	$4,378.44	$4,487.90	$4,600.10	$13,466.44
MediSource Foundation for Ambulatory	KS-26965L	15 Providers	$3,956.76	$4,055.68	$4,157.07	$12,169.51
Provider-Friendly Terminology (PFT) - Ambulatory	KS-26995L	60 Providers	$1,971.12	$2,020.40	$2,070.91	$6,062.43
DSM-5 for Millennium	KS-70000L	400 Licensed BH Professionals	$10,800.00	$11,070.00	$11,346.75	$33,216.75
Eligible Provider Quality Reporting	PV-22115L	32 Physicians	$8,027.04	$8,227,72	$8,433.41	$24,688.16
Term License Support Fees						
Cerner CMT (Enterprisewide) CMT Support	KS-22091LS	1 Enterprise	$4,864.92	$4,986.54	$5,111.21	$14,962.67
Ambulatory Content Package Support	KS-26982LS	15 Providers	$2,101.68	$2,154.22	$2,208.08	$6,463.98.
MediSource Foundation for Ambulatory Support	KS-26965LS	15 Providers	$1,899.24	$1,946.72	$1,995.39	$5,841.35
Provider-Friendly Terminology (PFT) – Ambulatory Support	KS-26995LS	60 Providers	$946.08	$969.73	$993.98	$2,909.79
`DSM-5 for Millennium Support	KS-70000LS	400 Licensed BH Professionals	$5,184.00	$5,313.60	$5,446.44	$15,944.04
Eligible Provider Quality Reporting Support	PV-22115LS	32 Physicians	$3,852.96	$3,949.28	$4,048.02	$11,850.26
Term License Fees Total			$39,268.56	$40,250.28	$41,256.53	$120,775.37
Term License Software Support Fees Total			$18,848.88	$19,320.09	$19,803.12	$57,972.09

Second Amendment
Cerner Corporation
104 of 106
MA-042-18010399
HCA ASR 19-000679
Page 104 of 106

Term Licensed Software Fee Schedule Table						
Solution Name	**Cerner Product Code**	**Inventory Quantity**	**Period One**	**Period Two**	**Period Three**	**Total**
Term License Fees						
Term Licensed Software and Support Grand Total			**$58,117.44**	**$59,570.38**	**$61,059.64**	**$178,747.451"**

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7   In all other respects, the terms of the underlying Agreement, not specifically changed by this

8 Amendment, shall remain in full force and are incorporated by reference herein.

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Second Amendment
Cerner Corporation
105 of 106
MA-042-18010399
HCA ASR 19-000679
Page 105 of 106

1   IN WITNESS WHEREOF, the parties have executed this Agreement, in the County of Orange,

2 State of California.

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4 CERNER CORPORATION

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7 BY: _Teresa Waller_____   DATED: 10/17/2019

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9 TITLE: Sr Director, Contract Management

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16 COUNTY OF ORANGE

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19 BY: _____   DATED: _____

20   HEALTH CARE AGENCY

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24 APPROVED AS TO FORM

25 OFFICE OF THE COUNTY COUNSEL

26 ORANGE COUNTY, CALIFORNIA

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29 BY: _Brittany McLean_____   DATED: 10/18/2019

30 DEPUTY

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35 If the contracting party is a corporation, two (2) signatures are required: one (1) signature by the Chairman of the Board, the President or

36 any Vice President; and one (1) signature by the Secretary, any Assistant Secretary, the Chief Financial Officer or any Assistant Treasurer.

37 If the contract is signed by one (1) authorized individual only, a copy of the corporate resolution or by-laws whereby the board of directors
has empowered said authorized individual to act on its behalf by his or her signature alone is required by ADMINISTRATOR.