RESOURCE AND PATIENT MANAGEMENT SYSTEM

Consolidated-Clinical Document Architecture (CCDA)

(BCCD)

Addendum to Installation Guide and Release Notes

Version 1.0 Patch 6
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Office of Information Technology
Division of Information Resource Management

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Preface

The purpose of this manual is to provide installation instructions for the Consolidated-Clinical Document Architecture (CCDA) v1.0 (BCCD) patch 6 package. The BCCD package is designed to generate industry-standard Continuity of Care Documents (CCD) in Health Level 7 (HL7) CCDA format, following the July 2012 Draft Standard for Trial Use (DSTU) standard, further restricted by Meaningful Use 2 (MU2) requirements. These documents can be transmitted to Indian Health Service (IHS) Health Information Exchange (HIE) repositories and retrieved by the Electronic Health Record (EHR) Graphical User Interface (GUI) using web services.

1.0   Introduction

1.1   Summary of Changes

Modified the contents of distribution section 2.1, overview of installation steps section 3.2, disk space for the CCDA audit log section 3.3.4, journaling section 3.4.1, and added install BCCD patches section 6.8 from the previous documented patch update.

1.1.1   Patch 1 (Last Documented Update)

Section 2.1 Contents of Distribution

Table 1-1: Contents of Distribution

File	Description
bccd0100.k	CCDA version 1.0 KIDS installation file
bccd0100.01k	CCDA version 1.0 patch 1 KIDS installation file

Section 3.2 Overview of Installation Steps

> The RPMS server's operating system (OS) and Ensemble must be patched before this application is installed. OIT has distributed a technical bulletin with patching instructions. Failure to apply all necessary patches may result in installation failure, application errors, and/or system crashes.

Installation of the BCCD package consists of the following activities:

1. Calculate the additional disk space required for the BCCD package and allocate disk space.

2. Perform pre-install steps, including enabling Long Strings, verifying access to OS configuration file, designating a directory where the new CCDA database will reside (one for each RPMS database), mapping BMW globals, and stopping CCDA.

3. Install the provided Kernel Installation and Distribution System (KIDS) build, bccd0100.k, which will install the CCDA software and the new CCDA Ensemble production.

4. Perform post-install steps, including setting up optional encryption, optional e-mail notifications, disabling journaling in the CCDA database, configuring the CCDA Caché(TM) Server Page (CSP) Application, setting up site-specific BCCD parameters, and starting CCDA Messaging.

Section 3.3.4 Disk Space for the CCDA Audit Log

For audit purposes, the CCDA database keeps a log of each CCDA document. The CCDA audit log data is stored in the global ^BCCD.Audit.AuditD. Instructions for accessing and viewing the audit log data can be found in the CCDA Security Manual.

To calculate how much disk space will be required to maintain the CCDA Audit Log, estimate how many CCDA documents will be generated on a daily basis. Since this can be difficult to predict, an assumption can be made and later re-evaluated once CCDA has been running for some time. Checking the CCDA Audit Log and examining the utilization pattern will enable a proper search by request date.

The average audit log entry occupies approximately 0.26 KB in the database. Assuming that there are 1000 CCDA documents generated per day, the daily disk space requirements will be:

- $1000*0.26 = 260$ KB per day

Multiplying this number by the number of business days in one year, we get:

- $260*250 = 65,000$ KB or 63.8 MB per year

This information is stored in the globals ^BCCD.Audit.AuditLogD and ^BCCD.Audit.AuditLogI in the new CCDA database, which is described below. This information must be kept on file for six years, due to government data retention requirements.

Section 3.4.1 Impact of Regular CCDA Operations on Journaling

The globals used by the BCCD package should not be journaled. Disabling journaling in the new CCDA database at post-install time is described later in this document. Nonetheless, the CCDA Ensemble production will do a limited amount of journaling even when the CCDA database is set up otherwise. This additional journaling is estimated to contribute 2-3 KB per processed CCDA document. See the appropriate section below to determine the estimated impact of the CCDA application on journaling at the site where this will be installed. The estimated impact will be dependent upon whether or not the site participates in the IHS HIE.

2.0   Patch 6 Updates

Section 2.1 Contents of Distribution

Table 2-1: Contents of Distribution

File	Description
bccd0100.06k	CCDA version 1.0 patch 6 KIDS installation file
bccd0100.06i.pdf	CCDA version 1.0 patch 6 Installation Manual
bccd0100.06t.pdf	CCDA version 1.0 patch 6 Technical Manual
bccd0100.06u.pdf	CCDA version 1.0 patch 6 User Manual

Section 3.2 Overview of Installation Steps

> The RPMS server's operating system (OS) and Ensemble must be patched before this application is installed. OIT has distributed a technical bulletin with patching instructions. Failure to apply all necessary patches may result in installation failure, application errors, and/or system crashes.

Installation of the BCCD package consists of the following activities:

1. Calculate the additional disk space required for the BCCD package and allocate appropriate disk space.

2. Perform pre-install steps:

    a. Enable Long Strings

    b. Verify access to OS configuration file

    c. Designate a directory where the new CCDA database will reside (one for each RPMS database)

    d. Mapping BMW globals

    e. Stop CCDA

3. Install the provided Kernel Installation and Distribution System (KIDS) build, **bccd0100.k**, which will install the CCDA software and the new CCDA Ensemble production.

4. Perform post-install steps, including:

    a. Set up optional encryption

    b. Configure optional e-mail notifications

    c. Disable journaling in the CCDA database

    d. Configure the CCDA CSP Application

    e. Set up site-specific BCCD parameters

    f. Start CCDA Messaging

5. Install BCCD patches 1-6, in order, following the instructions in the patch notes.

Section 3.3.4 Disk Space for the CCDA Audit Log

For audit purposes, the CCDA application keeps a log of each CCDA document. The CCDA audit log data is stored in the global ^BCCD.Audit.AuditD. Instructions for accessing and viewing the audit log data can be found in the CCDA Security Manual.

To calculate how much disk space will be required to maintain the CCDA Audit Log, estimate how many CCDA documents will be generated on a daily basis. Since this can be difficult to predict, an assumption can be made and later re-evaluated after CCDA has been running for some time. Examining the utilization pattern by checking the CCDA Audit Log, allows a search by request date.

The average audit log entry occupies approximately 0.26 KB in the database. Assuming that there are 1000 CCDA documents generated per day, the daily disk space requirements will be:

- $1000*0.26 = 260$ KB per day

Multiplying this number by the number of business days in one year, we get:

- $260*250 = 65,000$ KB or 63.8 MB per year

This information is stored in the globals ^BCCD.Audit.AuditLogD and ^BCCD.Audit.AuditLogI. Prior to patch 6, these globals were stored in the new CCDA database, which is described below. Starting with patch 6, these globals are stored in the RPMS database. The audit information must be kept on file for six years, due to government data retention requirements.

Section 3.4.1 Impact of Regular CCDA Operations on Journaling

Most of the globals used by the BCCD package should not be journaled. The exceptions to this rule are the audit log globals in patch 6 and later. Disable journaling in the new CCDA database at post-install time. The process is described later in this document. Nonetheless, the CCDA Ensemble production will do a limited amount of journaling even when the CCDA database is set up not to be journaled. This additional journaling is estimated to contribute 2-3 KB per processed CCDA document. Depending on whether the site participates in the IHS HIE, see the appropriate section below to determine the estimated impact of the CCDA application on journaling at the specific site.

Section 6.8 Install BCCD Patches

Install BCCD patches 1-6, in order. The instructions for installing each patch can be found in the corresponding patch notes.

Glossary

API

Application Programming Interface; an interface provided by a software application to allow other applications to interact with it.

BCCD

RPMS namespace for CCDA files, routines, and classes.

Web service

An API that allows communication with an application via Simple Object Access Protocol (SOAP) messages over HTTP.

Acronym List

Acronym	Term Meaning
API	Application Programming Interface
CCD	Continuity of Care Document
CCDA	Consolidated-Clinical Document Architecture
CSP	Caché® Server Page
EHR	Electronic Health Record
HIE	Health Information Exchange
HL7	Health Level Seven
IHS	Indian Health Service
HTTPS	Hypertext Transfer Protocol Secure
KIDS	Kernel Installation and Distribution System
MU2	Meaningful Use 2
OIT	Office of Information Technology
OS	Operating System
PHR	Personal Health Record
RPMS	Resource and Patient Management System
SOAP	Simple Object Access Protocol
XML	Extensible Markup Language

Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

Phone:　(888) 830-7280 (toll free)

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