



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Consolidated-Clinical Document Architecture (CCDA)

(BCCD)

Addendum to Technical Manual

Version 1.0 Patch 6
February 2017

Office of Information Technology
Division of Information Resource Management

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Preface

The purpose of this manual is to provide technical information about 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 contents of the routine list in Section: 5-1, routines with description in Section: 5-2, Standards and Conventions (SAC) requirements and exceptions Section: 11-0, added to the list of CCDA classes in Appendix C.1, C.3, C.5, updated CCDA Ensemble global mappings in Appendix F.1.2 from the previous documented patch update.

1.1.1 Patch 1 (Last documented update)

Section: 5-1 Routine List

- [BCCD1E00](#)
- [BCCD1P00](#)
- [BCCD1P01](#)
- [BCCD1P02](#)
- [BCCD1P03](#)
- [BCCD1P04](#)
- [BCCD1P05](#)
- [BCCDCLAS](#)
- [BCCDDPT](#)
- [BCCDEDIT](#)
- [BCCDPAT](#)
- [BCCDPUSH](#)
- [BCCDTSK](#)
- [BCCDTX](#)
- [BCCDTXA](#)
- [BCCDTXAB](#)
- [BCCDTXAC](#)
- [BCCDTXAD](#)
- [BCCDUTIL](#)
- [BCCDUTL1](#)

Section: 5-2 Routines with Description

Table 1-1: Routines

Routine	Description
BCCD1E00	KIDS environmental check routine
BCCD1P00	KIDS post-installation routine for CCDA 1.0 build
BCCD1P01	KIDS post-installation routine for patch 1
BCCD1P02	KIDS post-installation routine for patch 2
BCCD1P03	KIDS post-installation routine for patch 3
BCCD1P04	KIDS post-installation routine for patch 4
BCCD1P05	KIDS post-installation routine for patch 5
BCCDCLAS	Used by the post-installation routine to decrypt, and decompress Caché/Ensemble class definitions
BCCDDPT	Application Programming interface (API) for requesting Data Portability export summary documents
BCCDEDIT	Edit CCDA site-specific parameters
BCCDPAT	RPMS options for requesting one patient upload to HIE, requesting all patients upload to HIE, starting, and stopping CCDA.
BCCDPUSH	TaskMan task active only if the site participates in the IHE HIE; identifies recently modified patient records that need new CCD documents generated
BCCDTSK	TaskMan task that monitors the CCDA queue for new requests, and extracts data from RPMS
BCCDTX	Creates the BCCD NO LIMIT LOINC CODES Taxonomy
BCCDTXA	Continuation of BCCDTX
BCCDTXAB	Continuation of BCCDTX
BCCDTXAC	Continuation of BCCDTX
BCCDTXAD	Continuation of BCCDTX
BCCDUTIL	Contains utility subroutines used by the extract process
BCCDUTL1	Contains additional utility subroutines used by the extract process

Section: 11-0 SAC Requirements and Exemptions

The CCDA application has not been granted any SAC exemptions.

Appendix C: List of CCDA Classes

C.1 Audit

The BCCD.Audit classes support the auditing of CCDA requests, and the throttling of errors within the CCDA extract process.

- BCCD.Audit.AuditLog
- BCCD.Audit.ErrorThrottle

C.3 Install

The BCCD.Install classes support the installation of the CCDA application.

- BCCD.Install.Installer
- BCCD.Install.PostInstallTask
- BCCD.Install.PreInstallTask
- BCCD.Install.ProductionSettings

C.5 Tasks

The BCCD.Tasks classes consist of tasks that can be scheduled to run periodically or invoked from the RPMS namespace to run in the CCDA namespace. The classes support the weekly purge process, and the ability to start the Ensemble production from the RPMS namespace.

- BCCD.Tasks.Purge
- BCCD.Tasks.UpdateProductionState
- Appendix F: CCDA Ensemble Configuration and Management

F.1.2 Creating New Global Mappings

1. Navigate to the **Namespaces** page as follows:
 - a. Access Ensemble's Management Portal, and sign on as the administrator.
 - b. Select **System Administration** from the bottom of the left column, then select **Configuration**, then select **System Configuration**, then select **Namespaces**.
 - c. Click **Go** to go to the **Namespaces** page. The **Namespaces** page displays.
2. In the leftmost column, find the RPMS namespace associated with the new CCDA namespace created in Section: F.1.1.5.

<p>Note: This is the pre-existing RPMS namespace, not the newly created CCDA namespace.</p>
--

3. Select **Global Mappings** for the identified namespace. The **Global Mappings** page displays.

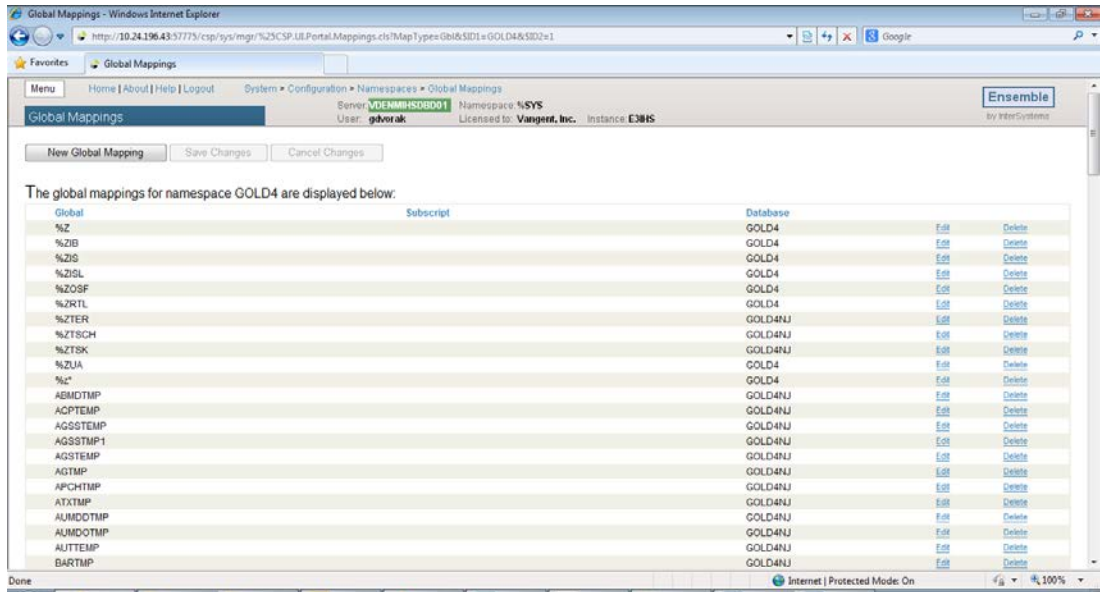


Figure F-1: Global Mappings

4. Click **New Global Mapping**, found near the top of the page. The **Global Mapping** dialog appears.

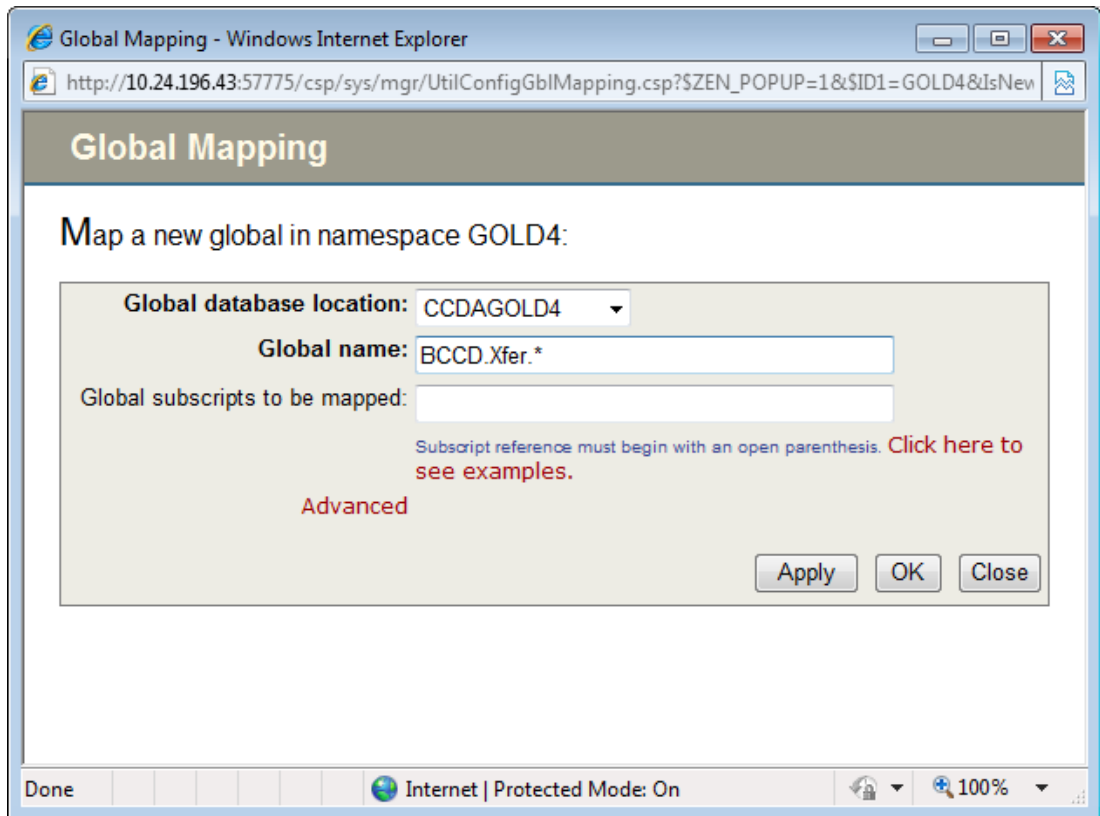


Figure F-2: Global Mapping dialog

5. In the **Global database location** list, select the **Name of the Caché database** created in Section: F.1.1.6.
6. In the **Global name** field type **BCCD.Xfer.***; **Make Sure** to include the asterisk (*).
7. Leave the **Global subscripts to be mapped** field blank.
8. Click **Apply**.
9. Click **Close**. The **Global Mappings** page displays.
10. Click **New Global Mapping**, found near the top of the page. The **Global Mapping** dialog appears.
11. In the **Global database location** list, select **the name of the Caché database** created in Section: F.1.1.4.
12. In the **Global name** field type **BCCD.Audit.***; **Make Sure** to include the asterisk.
13. Leave the **Global subscripts to be mapped** field blank.
14. Click **Apply**.
15. Click **Close**. The **Global Mappings** page displays.
16. Select **Save Changes** at the top of the page.
17. Click **Namespaces** in the blue line which reads **[Home] > [Configuration] > [Namespaces] > [Global Mappings]** at the top of the page. This will return to the **Namespaces** page.
18. In the leftmost column, find the name of the CCDA namespace created in Section: F.1.1.5. This is the name of the newly created CCDA namespace rather than the name of the RPMS namespace selected in Step 2.
19. Select **Global Mappings** for the identified namespace. The **Global Mappings** page displays.
20. Click **New Global Mapping** at the top of the page. The **Global Mapping** dialog displays.
21. In the **Global database location** field, select **the name of the RPMS database associated with this CCDA namespace**.
22. In the **Global name** field type **BCCDS**.
23. Leave the **Global subscripts to be mapped** field blank.
24. Click **Apply**.

25. Click **Close**. The **Global Mappings** page displays.
26. Click **New Global Mapping**, found near the top of the page. The **Global Mapping** dialog appears.
27. In the **Global database location** list, select **the name of the RPMS database associated with this CCDA namespace**.
28. In the **Global name** field type **VA**.
29. In the **Global subscripts to be mapped** field type **(200)**.
30. Click **Apply**.
31. Click **Close**. The **Global Mappings** page displays.
32. Click **Save Changes**.
33. **Repeat steps 2-32** for each **CCDA namespace** added to the **Ensemble instance**.

2.0 Patch 6 Updates

Section:5-1 Routine List

Added the following routines to the list:

[BCCD1P06](#)

[BCCDMON](#)

Section: 5-2 Routines with Description

Added the following routines and descriptions:

Table 2-1: Routines with descriptions

Routine	Description
BCCD1P06	KIDS post-installation routine for patch 6
BCCDMON	Application monitor

Section: 11- 0 SAC Requirements and Exemptions

The CCDA application was granted a SAC exemption on July 8, 2016 to allow the patch 6 post-install routine to move the audit log from the CCDA database to the RPMS database.

The exemption applies to the following programming standards:

- 2.2.3.16: Referencing global variables
- 2.2.4.14: Z* commands

The lines covered by the exemption are:

- MOVELOG+14^BCCD1P06
- MOVELOG+16^BCCD1P06
- MOVELOG+19^BCCD1P06
- MOVELOG+20^BCCD1P06
- MOVELOG+22^BCCD1P06
- MOVELOG+24^BCCD1P06
- MOVELOG+25^BCCD1P06

- MOVELOG+27^BCCD1P06
- MOVELOG+28^BCCD1P06
- MOVELOG+30^BCCD1P06
- MOVELOG+31^BCCD1P06
- MOVELOG+33^BCCD1P06
- MOVELOG+35^BCCD1P06
- MOVELOG+36^BCCD1P06
- MOVELOG+37^BCCD1P06
- MOVELOG+38^BCCD1P06
- CHKLOG+8^BCCD1P06
- CHKLOG+18^BCCD1P06
- CHKLOG+21^BCCD1P06
- CHKLOG+22^BCCD1P06
- CHKLOG+23^BCCD1P06
- CHKLOG+26^BCCD1P06
- CHKLOG+27^BCCD1P06
- CHKLOG+28^BCCD1P06
- CHKLOG+30^BCCD1P06
- CHKLOG+31^BCCD1P06
- CHKLOG+32^BCCD1P06

Appendix C:

C.1 Audit

Added the following:

- BCCD.Audit.ProductionStatus

C.3 Install

Added the following:

- BCCD.PostInstall patch6

C.5 Tasks

Added the following:

- BCCD.Tasks.ApplicationMonitor

Appendix F: CCDA Ensemble Configuration and Management

F.1.2 Creating New Global Mappings

1. Navigate to the **Namespaces** page as follows:
 - a. Access Ensemble's Management Portal and sign on as the administrator.
 - b. Select **System Administration** from the bottom of the left column, then select **Configuration**, then select **System Configuration**, and then select **Namespaces**.
 - c. Click **Go** to go to the **Namespaces** page.

The **Namespaces** page displays.

2. In the leftmost column, find the RPMS namespace associated with the new CCDA namespace created in Section: F.1.1.5.

Note: This is the pre-existing RPMS namespace, not the newly created CCDA namespace.

3. Select **Global Mappings** for the identified namespace. The **Global Mappings** page displays.

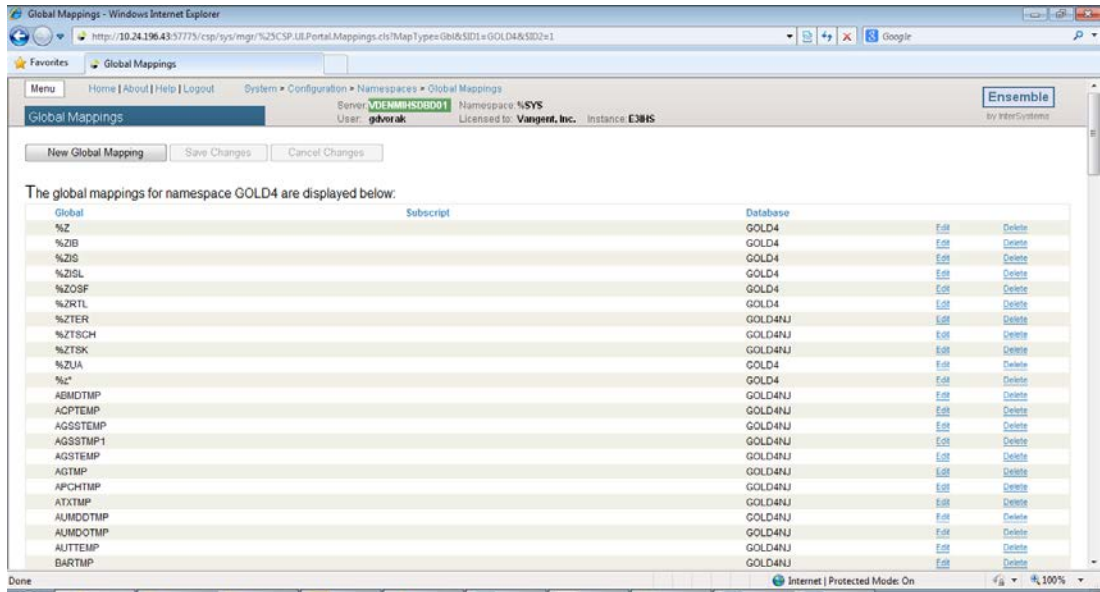


Figure F-3: Global Mappings

4. Click **New Global Mapping**, found near the top of the page. The **Global Mapping** dialog appears.

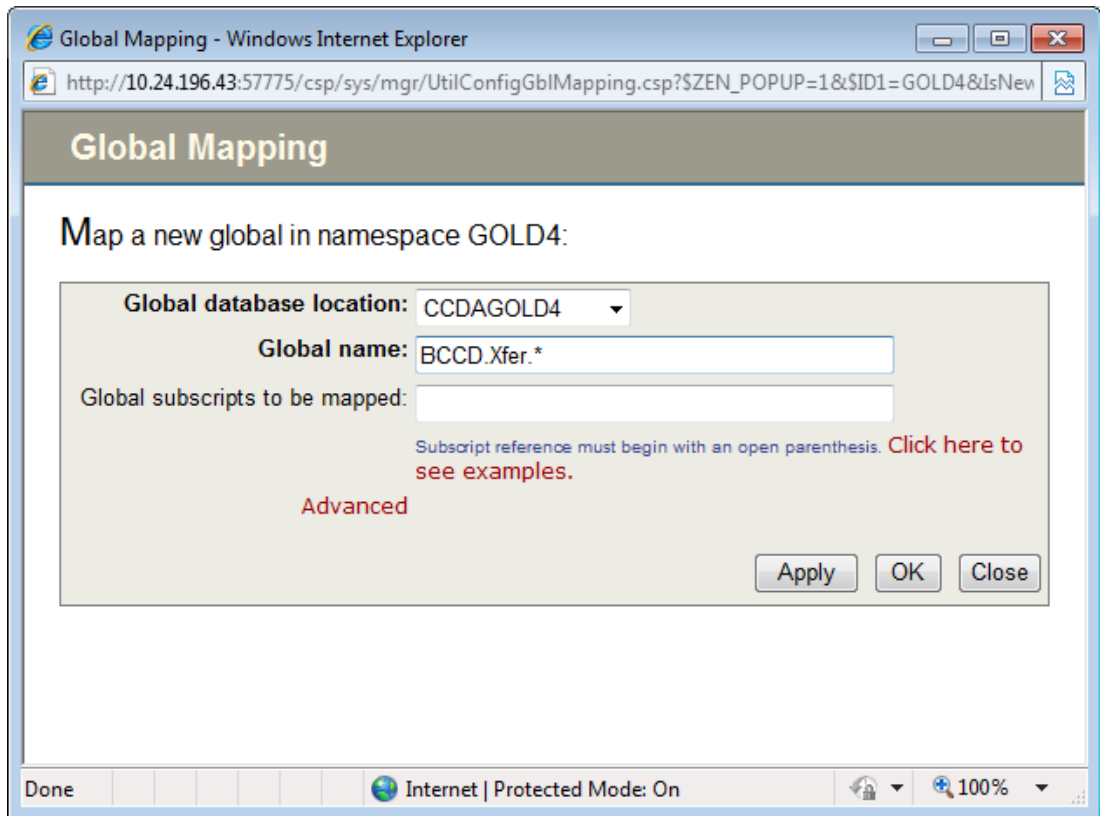


Figure F-4: Global Mapping dialog

5. In the **Global database location** list, select the name of the Caché database created in Section:.F.1.1.4.
6. In the **Global name** field type **BCCD.Xfer**, * **Make Sure** to include the asterisk (*).
7. Leave the **Global subscripts to be mapped field blank**.
8. Click **Apply**.
9. Click **Close**. The **Global Mappings** page displays.
10. Select **Save Changes** at the top of the page.
11. Click **Namespaces** in the blue line which reads **[Home] > [Configuration] > [Namespaces] > [Global Mappings]** at the top of the page. This will return to the **Namespaces** page.
12. In the leftmost column, find the name of the CCDA namespace created in Section: F.1.1.5. This is the name of the newly created CCDA namespace rather than the name of the RPMS namespace selected in Step 2.
13. Select **Global Mappings** for the identified namespace. The **Global Mappings** page displays.
14. Click **New Global Mapping** at the top of the page. The **Global Mapping** dialog displays.
15. In the **Global database location** field, select **the name of the RPMS database associated** with this **CCDA namespace**.
16. In the **Global name** field type **BCCDS**.
17. Leave the **Global subscripts to be mapped field blank**.
18. Click **Apply**.
19. Click **Close**. The **Global Mappings** page displays.
20. Click **New Global Mapping**, found near the top of the page. The **Global Mapping** dialog appears.
21. In the **Global database location** list, select the **name of the RPMS database associated** with this **CCDA namespace**.
22. In the **Global name** field type **VA**.
23. In the **Global subscripts to be mapped field type (200)**.
24. Click **Apply**.

25. Click **Close**. The **Global Mappings** page displays.
26. Click **Save Changes**.
27. Click **New Global Mapping**, found near the top of the page. The **Global Mapping** dialog appears.
28. In the **Global database location** list, select the **name of the RPMS database** associated with this **CCDA namespace**.
29. In the **Global name** field type **BCCD.Audit.***; make sure to include the asterisk.
30. Leave the **Global subscripts to be mapped** field blank.
31. Click **Apply**.
32. Click **Close**. The **Global Mappings** page displays.
33. **Repeat steps 2-32** for each **CCDA namespace** added to the F Ensemble instance

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.

HTTP

Hypertext Transfer Protocol; a widely-used communication protocol on the World Wide Web.

SOAP

Simple Object Access Protocol; the communication protocol and message format used in communicating with web services.

Taxonomy

In RPMS, a grouping of functionally related data elements, such as ICD codes. For CCDA, taxonomies are used to list procedures, test results and other data elements with non-standard data extraction criteria.

Web client

An application that consumes (accesses) a web service.

Web service

An API that allows communication with an application via SOAP messages over HTTP.

WSDL

Web Service Description Language; a file that describes a web service's API.

XML

Extensible Markup Language; a set of rules for encoding data in a machine-readable form.

Acronym List

Acronym	Term Meaning
API	Application Programming Interface
CCDA	Consolidated-Clinical Document Architecture
CCD	Continuity of Care Documents
DSTU	Draft Standard for Trial Use
EHR	Electronic Health Record
FM2C	FileMan-to-Class utility; prior to FM2C version 1.0, the abbreviation stood for FileMan-to-Caché mapper
GUI	Graphical User Interface
HIE	Health Information Exchange
HL7	Health Level Seven
IHS	Indian Health Service
KIDS	Kernel Installation and Distribution System
MU2	Meaningful Use 2
PHR	Personal Health Record
RPMS	Resource and Patient Management System
SAC	Standards and Conventions
VA	Veterans Administration
WSDL	Web Services Description Language

Contact Information

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

Phone: (888) 830-7280 (toll free)

Web: <https://www.ihs.gov/helpdesk/>

Email: support@ihs.gov