Version History

Change	Version	By
New version	**1.0**	**KK**
Modified CCN Application Document to include collection for Document section. i.e. Allow multiple documents. **Added CCN System Document to support host system integration**	**1.1**	**KK**
Added DocumentContentType in CCNDocument & CCNAppDocument structure **Updated CCNAppDocument, CCNDocument structure on typo and format. (2/12/2014)**	**1.2**	**KK**
Updated CCNDocument structure to include FileID	**1.2.1**	**KK**
Updated CCNDocument structure to include Sender/Recipient CompanyCode, Company Name1 and Name2. **Removed MyContactCompanyName from CCNAppDocument**	**1.2.2**	**KK**
Updated CCNDocument & CCNAppDocument structure to include multiple recipient email address per recipient company	**1.2.3**	**KK**
Added section to support GDSDocument structure	**1.3.0**	**KK**
Updated field names for DocumentTag -> DocumentTags, and DocumentKeyValue->DocumentKeyValues	**1.3.1**	**KK**
Added url for updated CCNDocument and CCNAppDocument support	**1.3.2**	**KK**

1. Web Service API (For Publishing only)

The followings information is required to publish document to CCN Service Bus via SOAP interface

Web service URL	Environment	Remarks
http://apidev.ccnhub.com/CCN.ServiceBus.WCFAdaptor/wcfAdaptorService.svc	Test	For version less than 1.3
http://apidev.ccnhub.com/CCN.ServiceBus.WCFAdaptor.V2/WcfAdaptorService.svc	Test	For version 1.3.x and above
TBA	Pre-Production	
TBA	Production	

The SOAP Request/Response Information

Element Name	Type	Remarks
PublishDocument	Operation	IWcfAdaptorService operation, used by application to publish document to CCN Service Bus
ccnDocument	String	PublishDocument operation's input parameter. There are many type of CCN Document formats, the supported types are listed in following sections of this document.
ErrorMessage	String	PublishDocument response parameter, this response parameter contains error message returned by CCN Service Bus. If publish operation is successful, error message will contain empty string.

2. Web Service Interface (For Subscriber Web Service implementation)

This section contains Interface (ISubscriberClient) requirement to be implemented by subscriber client as web service so that CCN Service Bus is able to push subscribed document to client by consuming the service.

Subscriber Web service URL implemented	Environment	Remarks
To be provided by Client	Test	
To be provided by Client	Pre-Production	
To be provided by Client	Production	

All client has to implement ISubscriberClient interface in order to receive document subscribed in CCN Service Bus.

Element Name	Type	Remarks
ISubscriberClient	Interface	This is the interface library to be implemented by Client web service
ReceiveDocument	Operation	ISubscriberClient operation which is used by CCN Service Bus to push subscribed document to client.
ccnDocument	String	ReceiveDocument operation's input parameter. There are many type of CCN Document formats, the supported types are listed in following sections of this document. Typically, the type of CCN Document format received is pre-defined and agreed by both client and CCN. Default format used is CCN Application Document format, unless otherwise requested by client.
ErrorMessage	String	ReceiveDocument's response parameter, this response parameter contains error message returned by Client web service. If publish operation is successful, error message will contain empty string.

3. CCN Application Document Specification

This is the default and recommended document format for all CCN Application to publish document to CCN Service Bus. Application is required to serialise this document structure into JSON Format before publishing to CCN ServiceBus.

Field	Format	Remark
SystemDocumentVersion	String M(3)	Default to "001"
SystemTransactionID	String M(50)	Unique transaction identifier; application to generate GUID
SystemTransactionTimestamp	String M(16) "yyyyMMddHHmmssff"	System Date & time for document submission at publishing application end; publishing application to generate y (year), M (month), d (day), H (hour 24), m (minute), s (second), f (second fraction)
Owner Section		
MyCompanyID	String M(50)	Company registered ID in LINC
MyCompanyCity	String M(3)	City code of registered company in LINC
MyEmailAddress	String O(50)	Email address of sender
MyProductID	String M(50)	Registered product/application in LINC that publish this document
Party Section	Collection	Can have up to 10 recipient sections
MyContactPartyID	String M(20)	Party ID that exist in Sender CAB For connecting to Airline, use IATA Carrier Code, e.g. "SQ, MH, QF" etc
MyContactUsers	Collection	Can have up to 20 recipient users section
MyContactEmailAddress	String O(50)	Email address of recipient
MyContactProductID	String O(50)	Recipient Product ID that subscribe For connecting to Airline, default to "AIR"
Document Information	Collection	Can repeat up to 10 documents
DocumentID	String ReadOnly (50)	Unique Document ID in CCN. Auto generated by publishing adaptor.
DocumentType	String M(20)	Registered document type to exchange
DocumentContentType	String M(10)	MIME Content Type; Default "text/xml" Common MIME format: "image/<xxx>" where xxx represent image extension type. E.g. png, gif, jpg etc. "application/pdf" for PDF document "application/ms-word" for MS-Word document "application/ms-excel" for MS-Excel document
DocumentReference	String O(250)	
DocumentKeyValues	Collection O	Can have up to 50 key values
Key	String M(100)	Key fields
Value	String M(100)	Value relating to the key
DocumentTags	Collection O	Can have up to 50 tags
Value	String M(250)	Tag value
DocumentBody	Byte[] M	Document converted to byte array

4. CCN System Document Specification

This is CCN Service Bus system document format. These are the fields which all supported document format will eventually mapped into, before publishing to the CCN Service Bus topic.
Due to its primitive information requirement on the fields, it is only used by CCN internal adaptors.

Field	Format	Remark
SystemDocumentVersion	String M(3)	Default to "001"
SystemTransactionID	String M(50)	Unique transaction identifier; publishing application to generate GUID
SystemTransactionTimestamp	String M(16) "yyyyMMddHHmmssff"	System Date & time for document submission at publishing application end; publishing application to generate y (year), M (month), d (day), H (hour 24), m (minute), s (second), f (second fraction)
Sender Section	Single	Allow only one sender
SenderCompanyID	String M(50)	Company registered ID in LINC External registered system have following defaults For ProductID = AIR, CompanyID can be as form of IATA Carrier Code For ProudctID = CUS, CompanyID can be the Country+City+"Custom" code of the custom location. e.g SGSINCustom
SenderCityCode	String M(3)	City code of registered company in LINC City code can be optional if product is externally registered.
SenderCompanyCode	String Read Only (50)	Read Only
SenderCompanyName1	String Read Only (200)	Read Only
SenderCompanyName2	String Read Only (200)	Read Only
SenderUserEmailAddress	String O(50)	Email address of sender
SenderProductID	String M(50)	Registered product/application in LINC that publish this document Beside LINC registered product id, the followings are external registered system product in CCN, which is available by default. AIR – Airline System GHA – Ground Handling Agent System CUS – Custom System
Recipient Section	Collection	Can have up to 10 recipient sections
RecipientCompanyID	String M(50)	Company registered ID in LINC External registered system have following defaults

		For ProductID = AIR, CompanyID can be as form of IATA Carrier Code For ProudctID = CUS, CompanyID can be the Country +"Custom" code of the customs location. e.g SGCustoms
RecipientCityCode	String M(3)	City code of registered company in LINC City code can be optional if product is externally registered.
RecipientCompanyCode	String Read Only (50)	Read Only
RecipientCompanyName1	String Read Only (200)	Read Only
RecipientCompanyName2	String Read Only (200)	Read Only
RecipientUsers	Collection	Can repeat up to 20 users
RecipientUserEmailAddress	*String O(50)*	*Email address of sender*
RecipientProductID	String M(50)	Registered product/application in LINC that publish this document Beside LINC registered product id, the followings are external registered system product in CCN, which is available by default. AIR – Airline System GHA – Ground Handling Agent System CUS – Custom System
Document Information	Collection	Can repeat up to 10 documents
DocumentID	String O(50)	Read Only. Unique Document ID in CCN
DocumentType	String M(20)	Registered document type to exchange
DocumentContentType	String M(100)	MIME Content Type; Default "text/xml" Common MIME format: "image/<xxx>" where xxx represent image extension type. E.g. png, gif, jpg etc. "application/pdf" for PDF document "application/ms-word" for MS-Word document "application/ms-excel" for MS-Excel document
DocumentReference	String O(250)	
DocumentKeyValues	Collection O	Can have up to 50 key values
Key	String M(100)	Key fields
Value	String M(100)	Value relating to the key
DocumentTags	Collection O	Can have up to 50 tags
Value	String M(250)	Tag value
DocumentBody	Byte[] M	Document converted to byte array
FileID	String ReadOnly	For system usage.

5. GDS Document Specification

This document format is supported by CHEXS for publishing to CCN Service Bus as well as when subscribing from the service bus. CHEXS will construct CCN XML document upon receiving the GDS Document from service bus before sending to recipients connected to CHEXS.

Field	Format	Remark
GDS Header Section	Single	Allow one section currently All fields in this section to be added to CCNDocument.DocumentKeyValue collection
DocumentVersion	String M(3)	Default to "001"
MessageKey	String M(50)	Unique transaction identifier in CHEXS; To be mapped to DocumentID in CCNDocument
MessageDateTime	DateTime	Message date time in CHEXS To be used later version
MessageType	String M(6)	Message type used by CHEXS To be mapped directly to CCNDocument.DocumentType
SenderPIMA	String M(50)	Sender PIMA address To be resolved in LINC to SenderCompanyID
RecipientPIMA	String M(50)	Recipient PIMA address To be resolved in LINC to RecipientCompanyID
MessageDetail	String M(200)	Message detail extracted by CHEXS
GDS Document Payload	Single	Support one document currently
Message	Byte[] M	Document converted to byte array.

