IBM

IBM Customer

IBM InfoSphere Change Data Capture Install Package Service Description

January 1, 2010

Information Management

Table of Contents

1. Description of Services

Information Management Analytics & Optimization (IMAO) Software Services is pleased to submit this Service Description to IBM Customer (<IBM Cust>). <IBM Cust> has requested the following services from IBM:

> ➢ IBM InfoSphere Change Data Capture (CDC) Install Package

This service provides the expert resources to install the CDC[1] software at your site. It also provides hands-on assistance to address questions and recap key issues covered in formal training classes, and to confirm that <IBM Cust>'s systems and resources are ready to begin applying the knowledge gained in class to <IBM Cust>'s business needs and operational requirements.

The IMAO Software Services Consultant will help guide <IBM Cust> on proven strategies and procedures that have been employed at other CDC installations. The completed installation also verifies that the software is supportable by IBM's Product Support organization.

The scope of the CDC[2] Install Package is limited to the installation of Change Data Capture for one way replication of maximum 50 tables from one Database Source to one Database Target[3]. The source or target databases supported include:

- DB2 (LUW) V8.2, V9.1.0, V9.5, V9.7
- SQL Server 2000, 2005, 2008
- Oracle 9i Database (release 9.2.0.5 or later)
- Oracle 10g Database (release 10.1.0.4 or later)
- Oracle 11g Database

The CDC install package will:

- Review <IBM Cust>'s environment[4]
  - Create & Review Environment Prerequisite Checklist
- Replicate 50 selected tables from one database source to one database target
- Install CDC on the Server where the Source Database resides
- Install CDC Access Manager in a Unix or Windows environment
- Install CDC Management Console in a Unix or Windows environment
- Install CDC on the Server where the Target Database resides
- Verify installation
  - check the number of program binaries in the system directory
  - check the Pointbase metadata to verify that all required tables are present

---

[1] IBM InfoSphere Change Data Capture v6.3 or higher only.
[2] The IBM InfoSphere Change Data Capture includes the installation of CDC on two servers to replicate one way from one database source system to one database target System.
[3] Services to configure replication for all or multiple databases are outside the scope of this Install Package, but may be delivered via a custom Statement of Work. Please contact your Software Service Seller for assistance.
[4] Installation of prerequisite products (hardware and software) required for CDC is <IBM Cust>'s responsibility. Please see the **Hardware/Software Requirements for Change Data Capture** document found on http://www-01.ibm.com/software/data/infosphere/change-data-capture/requirements.html

- start the listener

- review the install logs

- Perform Replication Configuration

  - Review the 50 tables selected for replication from one Source Database to one Target Database

  - Assist the customer with mapping of the 50 selected table definitions from source to target

  - Configure CDC to reflect those mappings

  - Create the subscriptions and determine how often to replicate based on information provided by <IBM Cust>

  - Start the replication and monitor the replication

  - Validate that the replication is done according to the mapping specification

- Deliver System Administration Handoff

- Deliver System Configuration Document

- Demonstrate the selected product to the Project Team

- Provide Project management and coordination to facilitate a professional project delivery

This Install Package includes a set of tasks that <IBM Cust> must complete to facilitate product installation and rollout. The actual duration of each task varies from customer to customer, based upon their knowledge of the products and the complexity of the anticipated CDC environment.

The resources required for this project will include both the IBM and <IBM Cust> personnel that are required to install and configure the CDC software.

At the completion of the CDC Install Package, <IBM Cust>'s system and resources will be ready for maintenance support and for initiating the process to configure the system for <IBM Cust>'s specific business requirements.

Any change in the scope of work defined in this Service Description requested by <IBM Cust> may result in additional costs and must be documented in a Project Change Request (PCR).

2.   Required Product Training

As part of the delivery, <IBM Cust> is required to have at least one person complete (or have previously completed) the following IBM training. The IBM education required for this installation is as follows:

- Course Code: DX550 – InfoSphere Change Data Capture Essentials

Please note that IBM may offer an equivalent Instructor Led Online (ILO) or Self Paced Virtual Course (SPVC). Any of these courses will satisfy this installation package training requirement.

The cost for these training courses is not included in this CDC Install Package. Please refer to the IBM Learning Services web site for detailed information regarding class cost, schedules, course descriptions, ordering options, registration instructions and relevant IBM web site locations.

While the training defined in this service provides a good foundation for administering the system in a pre-production status, <IBM Cust> should not consider this the total set of training that their resources will need to manage their production system. The Information Management Education Team can assist <IBM Cust> in obtaining a recommended training plan specific to <IBM Cust>'s requirements.

For training recommendations for your entire organization, please request contact the IS Education Team at iiseduc@us.ibm.com or 1-800-IBM-TEACH.

IBM Learning Services web site:
　　　http://www-01.ibm.com/software/data/infosphere/services/learning.html

In the interests of quality education, IBM reserves the right to update training courses at any time.

3. Resources

The <IBM Cust> Project Team will consist of the resources from the Information Management Account Team, the <IBM Cust> technical staff and, when applicable, an IBM Business Partner. Examples of Project Team members are listed below.

3.1 Information Management Services Team Resources

The CDC Project Lead coordinates the appropriate CDC resources as required. The CDC Team typically includes the following members:

- Solution Implementation Manager (SIM)
- Information Management Consultant (Delivery Consultant)
- Client Manager Representative (CMR)
- Services Sales Representative (Services Sales)
- Software Sales Representative(SSR)
- Technical Sales Specialist (TSS)

3.2 <IBM Cust> Team Resources

<IBM Cust> will need to identify internal personnel to fill the roles of the <IBM Cust> Project Team. <IBM Cust> is responsible for selecting a Project Lead to share lead responsibilities with the IPM Project Lead.

Depending upon, the project the <IBM Cust> Project Team may include any of the following roles:

- Project Manager
- Change Data Capture Administrator
- Database Administrator
- Software Administrator

4. Role Definitions

<IBM Cust> will need to identify internal personnel to fill the roles as listed in Section 3, Resources. The following outlines the general roles for each of these individuals. Please note that additional resources may be required at various phases of the installation. Likewise, not all of the individuals may necessarily be involved in this Install service.

ROLE	RESPONSIBILITY
Project & Architecture	
Project Manager	• Responsible for process, deliverables, and overall project management; Accountable to business drivers. • Coordinator of resource assignments. • Develop and manage issues resolution and escalation procedures. • Expert in project management.
IT Administration	
Software Administrator	• Installs, configures, and maintains the software technology for data integration initiatives. • Manages version or upgrade releases and issues related to the software technology. • Responsible for technology implementation that ensures expected performance delivery.
Database Administrator (DBA)	• Database commissioning: installation, configuration, deployment. • Database management: user accounts, security, performance. • Provide on-going support post-installation. • Design Database tables to be replicated

Change Data Capture System Administrator *	• Designs the complete replication environment and changes required
	    o Define Subscriptions from what source and target machines.
	    o Define tables to be replicated
	    o Define Replication Methods
	        ▪ Mirroring
	        ▪ Refresh
	    o Define Table Mappings
	• Designs INFOSPHERE CDC environment Security and changes required
	• First Level of Internal Support
	• Interfaces with IBM CDC Support team and the Project Leader if needed.
	• Collects INFOSPHERE CDC logs, coordinates with HW and or DB leads to get more HW or DB related logs
	• Performs first level troubleshooting
	    o Running test
	    o Running traces
	• Configures and maintains Access Manager
	• Configures and maintains Enterprise Administrator
	• Coordinates with IBM CDC support team for product updates
	• Documents CDC environmental changes
	• Responsible for assigning contact person for any InfoSphere CDC related items.

Change Data Capture Operators *	• Starts and Stops INFOSPHERE CDC Replication • Monitors INFOSPHERE CDC status • Reports INFOSPHERE CDC errors from logs to INFOSPHERE CDC Administrators
Change Data Capture Responsible for bringing	• Exports INFOSPHERE CDC Test Environment • Makes necessary changes in INFOSPHERE CDC Export File (XML format) to fit in production environment • Imports INFOSPHERE CDC Export File to Production • Does Quality Assurance before actual promotion of test environment to

ROLE	RESPONSIBILITY
Test to Production*	production • Does Quality Assurance after promotion of test environment to production

(*) One person might perform multiple roles

5. Responsibilities

5.1 <IBM Cust> Responsibilities (to be updated)

In order to facilitate delivery, <IBM Cust> has the responsibility to provide the following:

a.) Project Prerequisites

- All prerequisites must be met before IBM can begin the installation of the product.
- All hardware, software, and network configurations must meet CDC requirements for system size and performance for the purchased software as defined in the Environment Prerequisite Checklist. :.
- Download the CDC software to the appropriate servers prior to the resource arriving at <IBM Cust>'s facility.
- Complete the *Environment Prerequisite Checklist*
- Have attended the required training prior to the installation of any CDC software.

b.) A Project Lead with sufficient authority to:

- Represent <IBM Cust>'s interests
- Serve as the focal point for all decisions and communications
- Coordinate activities assigned to <IBM Cust> resources
- Sign project-related documents
- Provide information on selected tables for replication

c.) Local system administrator(s) trained on the administration of the CDC software as well as on other relevant technologies and products.

d.) After the <IBM Cust> CDC System Administrator has attended the proper training and has reinforced that training by observing the Delivery Consultant during the installation, he or she will be responsible for completing the following items.

- Creation of new mappings
- Creation of new subscriptions
- Design the CDC security and changes
- Monitor the CDC environment

e.) Adequate facilities for each Delivery Consultant including:

- cubicle, desk, telephone, and Internet access,
- remote access (e.g., VPN access),
- direct access to the keyboard.

f.) When performing remote work, <IBM Cust> will provide VPN access into <IBM Cust>'s network and remote access to a workstation in the network that:

- can connect to all required servers and –is preloaded with all required connectivity tools appropriate to <IBM Cust>'s environment.

g.) Product Subscription and Support Agreement in place through IBM.

h.) <IBM Cust> will make available all <IBM Cust> personnel required for this project based on the agreed-upon project schedule. Any significant delays caused by <IBM Cust> personnel not being available or project prerequisites not being met may result in schedule delays, which can impact the project sufficiently to require a chargeable PCR addressing additional or extended IBM personnel requirements and additional costs.

5.2 IBM Responsibilities

a.) Review Environment

- Create & Deliver Environment Prerequisite Checklist

b.) Validate the selected database to be replicated

c.) Install CDC

d.) Install CDC Access Manager

e.) Install CDC Management Console on the client system selected by <customer>

f.) Verify Installation

- checking the number of program binaries in the system directory
- checking the Pointbase metadata to verify that all required tables are present
- starting the listener
- reviewing the install logs

g.) Perform Replication Configuration

- Review the 50 tables selected for replication from one Source Database to one Target Database
- Assist the customer with mapping of the selected table definitions from source to target
- Configure CDC to reflect those mapping
- Create the subscriptions and determine how often to replicate based on information provided by <IBM Cust>
- Start the Replication and Monitor replication statistics
- Validate the Configuration by performing a standard set of database operations and checking the correctness of the result

h.) Perform System Administration Handoff

- Transfer of Information
- Routine Maintenance
- Backup Methodology
- Problem Reporting

i.) Demonstrate Product to the Project Team

j.) Deliver System Configuration Document

k.) Provide <IBM Cust> a completed CDC Install Completion Checklist

6. Assumptions & Limitations

6.1 Assumptions

a.) CDC is installed on one Source Server and one Target Server and is configured to perform one-way replication. A chargeable PCR will be required to perform two-way replication.

b.) <IBM Cust> will be responsible for the selection of up to 50 tables to be replicated.

c.) Configuration to integrate with another environment like IBM InfoSphere DataStage or MDM Server is not included in this CDC Install Package. A chargeable PCR will be required to perform these additional efforts in each environment.

d.) RAC Clustering for Oracle and SQL Server is not included in this CDC Install Package. A Chargeable PCR will be required to perform these additional efforts in each environment.

e.) <IBM Cust> has a valid maintenance support contract and has registered as a user in the IBM PMR support site.

f.) Additional resources and time for the development of "custom configurations" are not included in this service.

6.2 Service Limitations

The CDC Install Package does not include repairs, corrections or troubleshooting of performance degradation, data corruption, errors and faults that are discovered during the process due to hardware failures, or non-qualified hardware or operating systems. Repairs, corrections or troubleshooting of such errors and faults will be <IBM Cust>'s responsibility; any IBM involvement will be charged on a Time-and-Materials (T&M) basis.

IMAO resources will be provided Monday through Friday from 8:00 a.m. to 5:00 p.m., excluding holidays and vacation time. Specific details regarding schedules will be mutually agreed-upon prior to the project start-date.

6.2.1 Travel & Living Expenses

This Package does **not** include domestic travel and living expenses incurred by IMAO resources traveling to <IBM Cust>'s site in order to fulfill IBM's tasks and responsibilities pertinent to delivering this service.

The Delivery Consultant may travel to <IBM Cust>'s site for **two** (2) visits for tasks associated with delivering this service. It is intended that status meetings will be held via conference calls. <IBM Cust> will be billed actual travel and living costs.

IBM will invoice <IBM Cust> for travel and living expenses and other reasonable expenses incurred in connection with the Package delivery. Amounts are due upon receipt of invoice and payable within 30 days. <IBM Cust> agrees to pay accordingly, including any late payment fee. <IBM Cust> does not have to pay any amount disputed in good faith while it is being investigated, but <IBM Cust> remains obligated to pay any amount not in dispute.

Additional on-site assistance requested by <IBM Cust> beyond the number of visits indicated above will be billable subject to the execution of a PCR. IBM also reserves the right to bill <IBM Cust> for any additional trips that are the direct result of <IBM Cust>'s failure to meet or perform its obligations outlined herein.

7. Project Tasks & Deliverables

The Project Team will perform the following tasks. Deliverables for each task are detailed within the task descriptions.

7.1 Task 1: Kickoff Meeting

The purpose of this meeting is to prepare both the <IBM Cust> team and the CDC team for the CDC Install Project. Topics of discussion will include <IBM Cust>'s requirements, expectations, prerequisites, and schedules.

During this meeting the project team must finalize and document what will be the Source & Target Database for the CDC replication:

- DB2 (LUW) V8.2, V9.1.0, V9.5, V9.7

- SQL Server 2000, 2005, 2008

- Oracle 9i Database (release 9.2.0.5 or later)

- Oracle 10g Database (release 10.1.0.4 or later)

- Oracle 11g Database

7.1.1 Review Project Services Description

The SIM Project Lead will review the Install Package Service Description, the installation tasks, and roles and responsibilities with <IBM Cust>'s Project Team via a conference call

7.1.2 Define and Review Project Plan

Once selected, the joint <IBM Cust> and IBM Project Team customizes the sample project plan defining mutually agreed-upon dates for delivery (see Sample Project Plan). Each task is assigned a resource and a time window based on the effort required to complete the task. IBM strongly encourages the practice of joint task assignments as an excellent means of training and knowledge transfer for the team members.

7.1.3 Project Status

The SIM will track all issues and document their resolution in an Issues Log. Any issue whose resolution requires a change will be documented in a PCR.

7.2 Task 2: Environment Review

The SIM will review the CDC software purchased, <IBM Cust>'s server configuration (hardware, operating system and site specific software), CDC specific network configuration, and <IBM Cust>'s System Diagram. This review will encompass the items indicated in the *Environment Prerequisite Checklist* that is delivered to <IBM Cust>. Upon completion of <IBM Cust>'s portion of the document, the SIM will schedule the software installation.

Any questions arising from the completion of the *Environment Prerequisite Checklist* should be reviewed during the weekly status calls.

7.3 Task 3: Software Installation

The Delivery Consultant, with the assistance of <IBM Cust>'s Information Technology (IT) staff, will schedule the installation software for both source and target servers. <IBM Cust>'s IT staff must review the release notes included on the software media, which provides the latest information regarding operating system software release levels and patches required for software installation.

A member of <IBM Cust>'s IT staff must have attended the prerequisite training, as defined in 2. Required Product Training, prior to this step to facilitate appropriate system configuration choices and ease support transition to <IBM Cust>.

With the assistance of <IBM Cust>'s CDC Administrator, the Delivery Consultant will install the CDC software on the source & target servers.

7.3.1 Install InfoSphere CDC on the Source Server

The effort begins by installing the Software on the Source Server where the source Database resides.

7.3.2 Install InfoSphere CDC Access Manager

The CDC Access Manager is installed on a UNIX or Windows system.

7.3.3 Install InfoSphere CDC Management Console on the Client

The CDC Management Console is installed on a client workstation.

7.3.4 Install InfoSphere CDC on the Target Server

Install the Software CDC on the Server where the Database Target resides.

7.4 Task 4: Verify Installation

The installation is verified by:

- checking the number of program binaries in the system directory
- checking the Pointbase metadata to verify that all required tables are present
- starting the listener
- reviewing the install logs

7.5 Task 5: Perform Replication Configuration

7.5.1 Preparation of the replication

- Review the 50 tables selected for replication from one Source Database to one Target Database
- Assist the customer to document the table mapping

7.5.2 Configuration of the replication

With the CDC management Console:

- Configure CDC to reflect those mapping
- Create the subscriptions and determine how often to replicate
- Start the replication and monitor the replication
- Validate that the replication is done according to the mapping specification

7.6 Task 6: System Administration Handoff

7.6.1 Transfer of Information

The Delivery Consultant will review the CDC product with the <IBM Cust> System Administrator to better prepare <IBM Cust> for further expansion of the system.

7.6.2 Routine Maintenance

Routine maintenance involves reviewing the daily duties of <IBM Cust>'s System Administrator with respect to maintenance of the CDC system. These are tasks that should be performed daily and will be specific to <IBM Cust>'s usage of the CDC system and its configuration. IBM recommends that the System Administrator develop a schedule of "housekeeping" procedures and tasks to be performed. Some examples include:

- Performance monitoring
- Monitoring database log file
- Initiating CDC system backup preparation
- Checking the event log
- Checking CDC system administration log
- Checking the amount of free space for the projects, datasets, and databases

7.6.3 Review Backup Methodologies

The Delivery Consultant will review possible backup strategies with the <IBM Cust> System Administrator. This Install Package does <u>not</u> provide for the Delivery Consultant to analyze <IBM Cust>'s backup objectives nor does it develop the plan to meet those objectives.

7.6.4 Problem Reporting

Before calling IBM Customer Support, full documentation of the problem at hand always expedites resolution and helps maintain internal system up-time records. The Delivery Consultant will review troubleshooting and problem reporting procedures and provide a trouble report template to <IBM Cust>. Over time the <IBM Cust> System Administrator will learn to determine the nature of problems that arise and will be able to resolve or report them as necessary.

For integrity issues, IBM requests that <IBM Cust> contact IBM Customer Support by using the IBM toll free Customer Service telephone number (1-800-429-7378).

7.7 Task 7: Demonstrate System to <IBM Cust> Project Team

After the initial samples have been tested, IBM will demonstrate the CDC system to the <IBM Cust> Project Team. The demonstration is an opportunity to share ideas on how to best configure the system post-installation, gather immediate feedback on issues that may have been overlooked, and solicit suggestions for system improvements. Other uses for the system are often identified in such meetings, giving impetus for follow-on projects.

7.8 Task 8: System Configuration Document

As <IBM Cust> tests the system, the Delivery Consultant will provide <IBM Cust> the completed System Configuration Document, which includes the IS system configuration data as well as the installed CDC software

versions and patches. This document represents a starting point for on-going maintenance and modification of the system.

7.9 Task 9: Project Completion

Upon demonstration of the product the Delivery Consultant will deliver to <IBM Cust> a completed Install Checklist which constitutes completion of this project. Please refer to *IBM InfoSphere Change Data Capture Install Checklist*.

If issues arise after delivery of the Project Completion Checklist, <IBM Cust> should contact IBM Customer Support by using the IBM toll free Customer Service telephone number (1-800-429-7378).