**Module 3 – Lesson 5 – Demo 1 (M03\_L05\_Demo01)**

# **Objective*:*** The goal of this demo is to demonstrate how CCI works and various stages of CCI.

**Setup:**

*Note – this demo uses data loaded in a previous demo – M03\_L02\_Demo01.*

1. Resume and scale the Synapse SQL Pool from the previous demos to DW1000c.

**Demo steps:**

1. The below script would do cleanup and drop the below tables:

IF OBJECT\_ID('fctTrip\_CCI') IS NOT NULL DROP TABLE [fctTrip\_CCI]

IF OBJECT\_ID('fctTrip\_CCI\_Ordered') IS NOT NULL DROP TABLE [fctTrip\_CCI\_Ordered]

1. Create CCI Version of the demo table. Review the CCI Health stats. Explain the relevance of the reported metrics

NOTE – this query runs against the original trip table, not the fctTrip table

This query runs for ~ 1min 45 seconds at DW1000c

CREATE TABLE [fctTrip\_CCI]

WITH

(DISTRIBUTION = HASH(DateID),

CLUSTERED COLUMNSTORE INDEX )

AS

SELECT \*

FROM trip

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI'

1. Add new data from the fctTrip table (300K rows). Review the CCI Stats - small inserts add data to the OPEN rowgroups. INSERT [fctTrip\_CCI]

INSERT [fctTrip\_CCI]

SELECT \*

FROM fctTrip

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI'

1. REORGANIZE the Index. Review the CCI Stats - OPEN RGs not changed

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI'

ALTER INDEX ALL ON [fctTrip\_CCI]

REORGANIZE

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI'

1. REBUILD the Index. Review the CCI Stats – All OPEN RGs now compressed.

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI'

ALTER INDEX ALL ON [fctTrip\_CCI]

REBUILD

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI'

1. Create an ORDERED CCI version of the demo table

NOTE – this query runs against the original trip table, not the fctTrip table

This query runs for ~ 2min 10 seconds at DW1000c – longer than the previous CTAS to unordered CCI

CREATE TABLE [fctTrip\_CCI\_Ordered]

WITH

(DISTRIBUTION = HASH(DateID),

CLUSTERED COLUMNSTORE INDEX ORDER (DateID, MedallionID))

AS

SELECT \*

FROM trip

SELECT \*

FROM vCCIHealth

WHERE Table\_Name = 'fctTrip\_CCI\_Ordered'

ALTER INDEX ALL ON [fctTrip\_CCI\_Ordered]

REBUILD