**RTXEXT-81 Functional Requirements**

The purpose of this document is to detail the functional requirements for RTX EVENTS and REQREP methods to POST and GET data to and from Tables in RTX.

**RATES Table**: Field Structure, Existing Data and Web GUI

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**EVENT 1 : “RATES\_PUBLISH”**

The “RATES\_PUBLISH” EVENT is to take three parameters, “YEAR”, “FIELD” and “VALUE” and is intended to update any of the non primary key values in the RATES table.

**Kotlin implementation**

eventHandler<RATES>(name = "RATES\_PUBLISH", transactional = true) {  
 onValidate { event ->  
 val message = event.details  
 verify {  
 entityDb hasEntry RATES.byYEAR(message.YEAR.toString())  
 }  
 ack()  
 }  
 onCommit { event ->  
 val newval = event.details  
  
 entityDb.upsert(EntityModifyDetails(newval, RATES. byYEAR, listOf("SOFR\_LCH")))  
  
 ack()  
 }  
}

**Excel Functional Signature**

=RTX\_Publish(<TABLE>, <RECORD>, <FIELD>, <VALUE>)

=RTX\_Publish(“RATES”, “2Y”, “SOFR\_LCH”, “3.9”)

Excel function constructs the HttpRequestAsync JSON and POSTS it to the “RATES\_PUBLISH” EVENT and would update the 2Y SOFR\_LCH value to 3.9

=RTX\_Publish(“RATES”, “5Y”, “UST\_Y”, “3.61”) would update the 5Y “UST\_Y” value in the RATES table to 3.61

**Postmaster Test**

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**REQREP 1 : “RATES\_REQUEST”**

The “RATES\_ REQUEST” REQREP is to takes one parameter, “YEAR” and is intended to return all values in the RATES table based on a specific “YEAR”

**Kotlin implementation**

requestReply("RATES\_REQUEST", RATES){  
  
 request{  
 RATES   
 }  
  
 where { row, parameters ->  
 row.YEAR.equals(parameters.getString("YEAR"))  
 }  
}

**Excel Functional Signature**

=RTX\_Request(<TABLE>, <RECORD>, <FIELD>)

=RTX\_ Request (“RATES”, “2Y”, “SOFR\_LCH”)

Excel function constructs the HttpRequestAsync JSON and GETS to the “RATES\_REQUEST” REQREP and would return the 2Y SOFR\_LCH value of 3.5

**Postmaster Test**

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**REQREP 2 : “LAST\_TRADE\_REQUEST”**

The “LAST\_TRADE\_ REQUEST” REQREP is to takes one parameter, “YEAR” and is intended to return the LAST trade record in the TRADES table based on a specified “YEAR” parameter.

**Optional Functionality – Not essential right now**

EVENT 3 : “RATES\_INSERT”

EVENT to INSERT new YEAR record into the RATES table

EVENT 4 : “RATES\_DELETE”

EVENT to DELETE a specific YEAR record into the RATES table