

**Oracle Utilities Digital Asset Cloud
Service Integration to Oracle Utilities Grid
Edge Distributed Energy Resources
Management System**

Data Mapping Guide

Release 22C

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Oracle Utilities Digital Asset Cloud Service Integration to Oracle Utilities Grid Edge Distributed Energy Resources Management System Data Mapping Guide, Release 22C

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Preface

Welcome to the Oracle Utilities Digital Asset Cloud Service Integration to Oracle Utilities Grid Edge Distributed Energy Resources Management System Data Mapping Guide.

The preface includes the following:

- [Audience](#)
- [Documentation and Resources](#)
- [Documentation Accessibility](#)
- [Conventions](#)
- [Acronyms](#)

Audience

This document is intended for anyone implementing the Oracle Utilities Digital Asset Cloud Service integration with Oracle Utilities Grid Edge Distributed Energy Resources Management System.

Documentation and Resources

For more information regarding this integration, foundation technology and the edge applications, refer to the following documents:

Product Documentation

Topic	Location
Oracle Utilities Digital Asset Cloud Service Integration to Oracle Utilities Grid Edge Distributed Energy Resources Management System documentation	https://docs.oracle.com/en/industries/energy-water/integrations-index.html
Oracle Utilities Network Management System documentation	https://docs.oracle.com/en/industries/energy-water/network-management-system/
Oracle Utilities Digital Asset Cloud Service documentation	https://docs.oracle.com/en/industries/energy-water/digital-asset-cloud-service/

Additional Documentation

Resource	Location
Oracle Support	<p>Visit My Oracle Support at https://support.oracle.com regularly to stay informed about updates and patches.</p> <p>Refer to the <i>Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1)</i> on My Oracle Support to determine if support for newer versions of the listed products is included.</p> <p>For more information, refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm</p>
Oracle Technology Network (OTN) Latest versions of documents	http://www.oracle.com/technetwork/index.html
Oracle University for training opportunities	http://education.oracle.com/

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support for the hearing impaired. Visit: <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs>

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Acronyms

The following terms are used in this document:

Term	Expanded Form
OIC	Oracle Integration Cloud
DACS	Oracle Utilities Digital Asset Cloud Service
DRMS	Oracle Utilities Grid Edge Distributed Energy Resources Management System

Chapter 1

Data Mapping

This chapter provides mapping details for the following integration points:

- [Enrollment Request \(Oracle Utilities Grid Edge Distributed Energy Resources Initiated\)](#)
- [Enrollment Synchronization \(Oracle Utilities Digital Asset Management Initiated\)](#)
- [Device Status Check \(Oracle Utilities Digital Asset Management Initiated\)](#)
- [Device Status Check Acknowledgment \(Oracle Utilities Grid Edge Distributed Energy Resources Management System Initiated\)](#)
- [Event Device Reservation \(Oracle Utilities Grid Edge Distributed Energy Resources Management System Initiated\)](#)
- [Pre-Event Cancellation \(Oracle Utilities Grid Edge Distributed Energy Resources Management System Initiated\)](#)

Enrollment Request (Oracle Utilities Grid Edge Distributed Energy Resources Initiated)

This section describes data mapping for the following:

- [Post DACS Enrollment Request Data Mapping](#)
- [Receive DRMS Enrollment Request Response Data Mapping](#)

Post DACS Enrollment Request Data Mapping

The Post DACS Enrollment Request mapping details are shown in the table below:

DRMS (Enroll /enroll-to-dacs)	DACS (Digital Asset Enrollments createDigitalAssetEnrollment X1-DigitalAssetEnrollment)	DVM Mapping	Comments
receiveDRMSEnrollmentRequest Request Message	postDACSEnrollmentRequest Request Message	DVM Name	
params			
messageId	transactionId		
customerInfo	customerInfo		
cisPersonId	cisPersonId		
cisAccountId	cisAccountId		
name	name		
homePhone	homePhone		
businessPhone	businessPhone		
email	email		
programInfo	programInfo		
cisServiceAgreementId	cisServiceAgreementId		
programCode	programCode		
startDateTimeISO	startDate		substring-before(startDateTimeISO, "T")
endDateTimeISO			Will be mapped in future release.

DRMS (Enroll /enroll-to-dacs)	DACS (Digital Asset Enrollments createDigitalAssetEnrollment X1- DigitalAssetEnrollment)	DVM Mapping	Comments
receiveDRMSEnrollmentRequest Request Message	postDACSEnrollmentRequest Request Message	DVM Name	
locationInfo	locationId		
division	division		
cisPremiseId	cisPremiseId		
cisServicePointId	cisServicePointId		
timeZone	timeZone		
address1	address1		
address2			
address3			
address4			
city	city		
country	country		
county	county		
state	state		
postal	postal		
assetInfo	assetInfo		
installationMethod	installationMethod		
assetOwnership	assetOwnership		
assetList	assetList		
sequence	sequence		
assetId	assetId		

DRMS (Enroll /enroll-to-dacs)	DACS (Digital Asset Enrollments createDigitalAssetEnrollment X1-DigitalAssetEnrollment)	DVM Mapping	Comments
receiveDRMSEnrollmentRequest Request Message	postDACSEnrollmentRequest Request Message	DVM Name	
specification	specification	OUTL-BRT-DACS-DRMS_AssetSpec	
assetType	assetType		
badgeNo	badgeNo		
serialNo	serialNo		
nicId	nicId		
headEndSystem	headEndSystem		
	ConnectivityProperties		
	ConnectivityProperties/Plugin		
drmsInstanceId	ConnectivityProperties/Plugin/ConnectionId	OUTL-BRT-DRMSID-TO-DACSID	Will be mapped in the future release.

Receive DRMS Enrollment Request Response Data Mapping

The Receive DRMS Enrollment Request Response mapping details are shown in the table below:

DACS (Digital Asset Enrollments createDigitalAssetEnrollment X1-DigitalAssetEnrollment)	DRMS (Enroll /enroll-to-dacs)	DVM Mapping	Comments
postDACSEnrollmentRequest Response Message	receiveDRMSEnrollmentRequest Response Message	DVM Name	
	MsgAck		
	MsgAck/responses		

DACS (Digital Asset Enrollments createDigitalAssetEnrollment X1-DigitalAssetEnrollment)	DRMS (Enroll /enroll-to-dacs)	DVM Mapping	Comments
postDACSEnrollmentRequest Response Message	receiveDRMSEnrollmentRequest Response Message	DVM Name	
	MsgAck/responses/response		
response/messageCategory	MsgAck/responses/response/value		fn:concat(\$response/messageCategory, “:”, \$response/exception/expandedMessage)
response messageNumber	MsgAck/responses/response/id		
response/status	MsgAck/responses/response/responseCode	OUTL-BRT-DACS_DRMS_EnrollmentStatus	SUCCESS FAILURE ERROR
	MsgAck/responses/response/responseTimeISO		xp20:format-dateTime (xsd:dateTime (fn:current-dateTime ()), '[Y0001]-[M01]-[D01]T[H01]:[m01]:[s01].000Z')
response/transactionId	MsgAck/responses/response/messageId		
response/enrollmentId	MsgAck/responses/response/dacsMessageId		
	MsgAck/ackType		SUCCESS FAILURE ERROR
	MsgAck/whenISO		xp20:format-dateTime (xsd:dateTime (fn:current-dateTime ()), '[Y0001]-[M01]-[D01]T[H01]:[m01]:[s01].000Z')

Enrollment Synchronization (Oracle Utilities Digital Asset Management Initiated)

This section describes data mapping for the following:

- [Post DRMS Enrollment Synchronization Data Mapping](#)
- [Post DACS Enrollment Synchronization Acknowledgment Data Mapping](#)
- [Receive DACS Enrollment Synchronization Response Data Mapping](#)

Post DRMS Enrollment Synchronization Data Mapping

The Post DRMS Enrollment Synchronization mapping details are shown in the table below:

DACS (Synchronize Digital Asset (NMS) DRMS_X1-NMSDASMSG)	DRMS (Enroll /enroll)	DVM Mapping	Comments
receiveDACSEnrollmentSync Request Message	postDRMSEnrollmentSync Request Message	DVM Name	
sendDetails/syncRequestId	dacsMessageId		
sendDetails/contactInfo	contactInfo		
sendDetails/contactInfo/contactId	contactId		
sendDetails/contactInfo/cisPersonId	cisPersonId		
sendDetails/subscriptionInfo	subscriptionInfo		
sendDetails/subscriptionInfo/subscriptionId	subscriptionId		
sendDetails/subscriptionInfo/cisAccountId	cisAccountId		
sendDetails/subscriptionInfo/subscriptionType	subscriptionType		
sendDetails/subscriptionInfo/status	status		
sendDetails/subscriptionInfo/programId	programId		
sendDetails/subscriptionInfo/startDateTime	startDateTimeISO		
sendDetails/subscriptionInfo/endDateTime	endDateTimeISO		
sendDetails/subscriptionInfo/programCode	programCode		

DACS (Synchronize Digital Asset (NMS) DRMS_X1-NMSDASMSG)	DRMS (Enroll /enroll)	DVM Mapping	Comments
receiveDACSEnrollmentSync Request Message	postDRMSEnrollmentSync Request Message	DVM Name	
sendDetails/locationInfo	locationInfo		
sendDetails/locationInfo/division	division		
sendDetails/locationInfo/servicePointId	servicePointId		
sendDetails/locationInfo/cisPremiseId	cisPremiseId		
sendDetails/locationInfo/cisServicePointId	cisServicePointId		
sendDetails/locationInfo/controllableDevices	controllableDevices		
sendDetails/locationInfo/controllableDevices/equipmentList			
sendDetails/locationInfo/controllableDevices/equipmentList/deviceId			
sendDetails/locationInfo/controllableDevices/equipmentList/deviceType	deviceType		
sendDetails/locationInfo/controllableDevices/equipmentList/badgeNumber	badgeId		
sendDetails/locationInfo/controllableDevices/equipmentList/serialNumber	serialId		
sendDetails/locationInfo/controllableDevices/equipmentList/nicid	nicid		
sendDetails/locationInfo/controllableDevices/equipmentList/specification	specification		
sendDetails/locationInfo/controllableDevices/equipmentList/headEndSystem	headEndSystem		
sendDetails/locationInfo/controllableDevices/equipmentList/installDateTime	installISO		

DACS (Synchronize Digital Asset (NMS) DRMS_X1-NMSDASMSG)	DRMS (Enroll /enroll)	DVM Mapping	Comments
receiveDACSEnrollmentSync Request Message	postDRMSEnrollmentSync Request Message	DVM Name	
sendDetails/locationInfo/controllableDevices/equipmentList/removalDateTime	removalISO		
sendDetails/locationInfo/controllableDevices/equipmentList/status	status		
sendDetails/facilityInfo	facilityInfo		
sendDetails/facilityInfo/facilityId	facilityId		
sendDetails/facilityInfo/transformerNumber	transformerNumber		
	ConnectivityProperties		
	ConnectivityProperties/Plugin		
sendDetails/locationInfo/division	ConnectivityProperties/Plugin/ConnectionId	OUTL-BRT-DRMSID-TO-DACSID	

Post DACS Enrollment Synchronization Acknowledgment Data Mapping

The Post DACS Enrollment Synchronization Acknowledgment mapping details are shown in the table below:

OIC (enrollmentSyncAck)	DACS (Master Data Synchronization: F1-SyncRequest)	DVM Mapping	Comments
postOICErollmentSyncAck Request Message	postDACSErollmentSyncAck Request Message	DVM Name	
MsgAck			
MsgAck/responses			
MsgAck/responses/response			
MsgAck/responses/response/responseCode	F1-UpdateSyncRequest/hasError		“true” when Error

OIC (enrollmentSyncAck)	DACS (Master Data Synchronization: F1-SyncRequest)	DVM Mapping	Comments
postOICEenrollmentSyncAck Request Message	postDACSEnrollmentSyncAck Request Message	DVM Name	
MsgAck/responses/response/dacsMessageId	templateParameters/syncRequestId		
	F1-UpdateSyncRequest/syncRequestId		
MsgAck/ackType			
	F1-UpdateSyncRequest/exceptionInfo		
	F1-UpdateSyncRequest/exceptionInfo/sequence		"1"
	F1-UpdateSyncRequest/exceptionInfo/messageCategory		"11114"
	F1-UpdateSyncRequest/exceptionInfo/messageNumber		"31002"
concat(MsgAck/responses/response/id, MsgAck/responses/response/value)	F1-UpdateSyncRequest/exceptionInfo/comments		
	F1-UpdateSyncRequest/exceptionInfo/messageParameters		
	F1-UpdateSyncRequest/exceptionInfo/messageParameters		
	F1-UpdateSyncRequest/exceptionInfo/messageParameters/parameterSequence		"1"
concat(MsgAck/responses/response/id, MsgAck/responses/response/value)	F1-UpdateSyncRequest/exceptionInfo/messageParameters/messageParameterValue		

Receive DACS Enrollment Synchronization Response Data Mapping

The Receive DACS Enrollment Synchronization Response mapping details are shown in the table below:

DRMS (Enroll /enroll)	DACS (Synchronize Digital Asset (NMS) DRMS_X1-NMSDASMSG)	DVM Mapping	Comments
recieveDACSEnrollmentSync Request Message	recieveDACSEnrollmentSync Response Message	DVM Name	
sendDetails/syncRequestId	responseDetails/externalId		Same value as in \$varDRMSResponse/responses/response/dacsMessageId

Device Status Check (Oracle Utilities Digital Asset Management Initiated)

This section describes data mapping for the following:

- [Post DRMS Device Status Check Data Mapping](#)
- [Receive DACS Enrollment Synchronization Data Mapping](#)

Post DRMS Device Status Check Data Mapping

The Post DRMS Device Status Check mapping details are shown in the table below:

DACS (receiveDACSDetailsRequest Message)	DRMS (DeviceStatusCheck /status_check request)	DVM Mapping	Comments
receiveDACSEnrollmentSync Request Message	postDRMSDeviceStatusCheck Request Message	DVM Name	
sendDetails/communicationId	dacsMessageId		
sendDetails/deviceInfo	DeviceInfo		
sendDetails/deviceInfo/division	DeviceInfo/division		
sendDetails/deviceInfo/deviceType	DeviceInfo/deviceType		
sendDetails/deviceInfo/specification	DeviceInfo/specification		
sendDetails/deviceInfo/headEndSystem	DeviceInfo/headEndSystem		
sendDetails/deviceInfo/nicid	DeviceInfo/nicid		
	ConnectivityProperties		
	ConnectivityProperties/Plugin		
sendDetails/deviceInfo/division	ConnectivityProperties/Plugin/ConnectionId	OUTL-BRT-DRMSID-TO-DACSID	

Receive DACS Enrollment Synchronization Data Mapping

The Receive DACS Enrollment Synchronization mapping details are shown in the table below:

DRMS (DeviceStatusCheck /status_check request)	DACS (Controllable Device Check: DRMS_X1-CTRLDVCS)	DVM Mapping	Comments
postDRMSDeviceStatusCheck Response Message	receiveDACSDeviceStatusCheck Response Message	DVM Name	
MsgAck			
MsgAck/responses			
MsgAck/responses/response			
MsgAck/responses/response/value			
MsgAck/responses/response/id			
MsgAck/responses/response/responseCode			
MsgAck/responses/response/responseTimeISO			
MsgAck/responses/response/dacsMessageId			
MsgAck/ackType			
MsgAck/whenISO			
DACS (Controllable Device Check: DRMS_X1-CTRLDVCS)			
receiveDACSDeviceStatusCheck Request Message			
sendDetails/communicationId	responseDetails/externalId		Should be the same as the incoming DRMS response/dacsMessageId.

Device Status Check Acknowledgment (Oracle Utilities Grid Edge Distributed Energy Resources Management System Initiated)

This section describes data mapping for the following:

- [Post DACS Device Status Check Acknowledgment Data Mapping](#)
- [Receive DRMS Device Status Check Acknowledgment Data Mapping](#)

Post DACS Device Status Check Acknowledgment Data Mapping

The Post DACS Device Status Check Acknowledgment mapping details are shown in the table below:

DRMS (deviceStatusCheckAck: /status-check-ack-to-dacs)	DACS (ControllableDeviceStatusCheckResponse: X1-CtrlDvcStatusCheckResp)	DVM Mapping	Comments
receiveDRMSDeviceStatusCheckAck Request Message	postDACSDeviceStatusCheckAck Request Message	DVM Name	
dacsMessageId	responseDetail/transactionId		The “messageId” that was used in the inbound /status-check needs to be the same “messageId” from the outbound message as that’s the link for DACS from the ack.
responseCode	responseDetail/result/status		Approved values are SUCCESS FAILURE and are returned from DRMS after LEC check

Receive DRMS Device Status Check Acknowledgment Data Mapping

The Receive DRMS Device Status Check Acknowledgment mapping details are shown in the table below:

DACS (ControllableDeviceStatusCheckResponse: X1-CtrlDvcStatusCheckResp)	DRMS (deviceStatusCheckAck: /status-check-ack-to-dacs)	DVM Mapping	Comments
postDACSDeviceStatusCheckAck Response Message	receiveDRMSDeviceStatusCheckAck Response Message	DVM Name	
boStatus	MsgAck/responses/response/responseCode		SUCCESS ERROR FAILURE

DACS (ControllableDeviceStatusCheckResponse: X1-CtrlDvcStatusCheckResp)	DRMS (deviceStatusCheckAck: /status-check- ack-to-dacs)	DVM Mapping	Comments
postDACSDeviceStatusCheckAck Response Message	receiveDRMSDeviceStatusCheckAck Response Message	DVM Name	
communicationId	MsgAck/responses/response/dacsMessageId		
	MsgAck/responses/response/responseTimeISO		xp20:format-dateTime (xsd:dateTime (fn:current-dateTime ()), '[Y0001]-[M01]-[D01]T[H01]:[m01]:[s01].000Z')
	MsgAck/ackType		SUCCESS ERROR FAILURE
	MsgAck/whenISO		xp20:format-dateTime (xsd:dateTime (fn:current-dateTime ()), '[Y0001]-[M01]-[D01]T[H01]:[m01]:[s01].000Z')

Event Device Reservation (Oracle Utilities Grid Edge Distributed Energy Resources Management System Initiated)

This section describes data mapping for the following:

- [DRMS-DACS Device Reservation Data Mapping](#)

DRMS-DACS Device Reservation Data Mapping

The DRMS-DACS Device Reservation mapping details are shown in the table below:

Input: Json Request Message with Device Reservation File, CSV Format attachment		DACS REST Web Service Name: X1-DigitalAssetEventParticipation, Operation: createDigitalAssetEventParticipation			DVM Mapping	Comments
DRMS Element Name	Element Name	Parent Element	Type	DVM		
	input	Group				
drmsInstanceId				OUTL-BRT-DACS_DRMS_Routing	Identifies which NMS instance the message is coming from to route it to the appropriate DACS instance coming from the Json request message.	
messageId					Uniquely identifies the request message.	
eventId	externalEventIdentifier	input	Field		Comes from the Json request message.	
eventType	eventType	input	Field	OUTL-BRT-DACS_DRMS_EventyType	Comes from the Json request message. Types: ECONOMIC or EMERGENCY	
eventStatus					Not mapped	
eventStartDateTime	eventStartDateTime	input			Event start date and time Comes from the Json request message. Date should be in UTC and XSD format.	
eventEndDateTime	eventEndDateTime	input	Field		Event end date and time. Comes from the Json request message. Date should be in UTC and XSD format.	

Input: Json Request Message with Device Reservation File, CSV Format attachment		DACS REST Web Service Name: X1-DigitalAssetEventParticipation, Operation: createDigitalAssetEventParticipation		DVM Mapping	Comments
DRMS Element Name	Element Name	Parent Element	Type	DVM	
	deviceList	input	List		Loops through each record in the file
recordId					Uniquely identifies the record in the file.
nicId	nicId	deviceList	Field		Network Interface Controller Identifier It identifies the device.
headEndSystemId	headEndExternalId	deviceList	Field		Head End System Example: NEST, Ecobee, etc
reservationStartDateTime	reservationStartDateTime	deviceList	Field		Actual Optional Date should be in UTC and XSD format.
reservationEndDateTime	reservationEndDateTime	deviceList	Field		Optional Date should be in UTC and XSD format.

Pre-Event Cancellation (Oracle Utilities Grid Edge Distributed Energy Resources Management System Initiated)

This section describes data mapping for the following:

- [DRMS-DACS Pre-Event Cancellation Data Mapping](#)

DRMS-DACS Pre-Event Cancellation Data Mapping

The DRMS-DACS Pre-Event Cancellation mapping details are shown in the table below:

Input: Json Request Message from DRMS		DACS REST Web Service Name: X1-DigitalAssetEventParticipation, Operation: preEventCancellation		DVM Mapping	Comments
DRMS Element Name	Element Name	Parent Element	Type	DVM	
	Input	Group			
drmsInstanceId				OUTL-BRT-DACS_DRMS_Routing	Identifies which NMS instance the message is coming from to route it to the appropriate DACS instance. Comes from the Json request message.
messageId					Uniquely identifies the request message.
eventId	externalEventIdentifier	input	Field		Comes from the Json request message.
cancellationMessageText	cancellationMessageText	input	Field		Reason for the event cancellation.