Oracle® Energy and Water Storm Estimated Restoration Time

Oracle Energy and Water Storm ERT Administrator's Guide

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Preface

Learn to administer the Oracle Energy and Water Storm Estimated Restoration Time cloud service.

Audience

This guide is intended for administrators or implementers who must set up and configure the Oracle Energy and Water Storm Estimated Restoration Time (ERT) cloud service, or who must understand how to provide data for the cloud service.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. Visit Oracle Accessibility Learning and Support if you are hearing impaired.

Conventions

The table below describes the conventions used in this document.

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or glossary.
italic	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.

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Getting Started

The Oracle Energy and Water Storm Estimated Restoration Time cloud service is a web-based application that allows utilities to create accurate storm models and estimated restoration timelines (ERTs) based on historical storm and outage data. Staff at utilities can use the tool to collaboratively create a storm model, add multiple ERT curves to the storm model, and approve a single ERT as the official estimate for the upcoming storm. The tool can also be used to generate work plan projection timelines to get estimates of how long it will take crews to restore outages. Utilities can then share information from the approved ERT with regulators, customers, and other organizations to help them prepare for a storm.

This guide describes how to perform various administrative and data transfer tasks during the setup, launch, and ongoing maintenance of the Storm ERT cloud service. The main tasks include:

- Transfer Outage Data to Oracle Energy and Water
- Transfer Outage Data Using Network Management System
- Configure the Storm ERT Cloud Service

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Transfer Outage Data to Oracle Energy and Water

The Storm ERT cloud service relies on historical as well as up-to-date outage data to function. If you store and maintain outage data in your own system, you can extract and transfer the data to Oracle Energy and Water in a series of files that follow a standard format and specification. Oracle Energy and Water will coordinate with you during the setup of your Storm ERT cloud service to establish the data transfer.

If you are using Oracle Utilities Network Management System (NMS) to store your outage data, then you can leverage scripts to extract the data and export it for use in Storm ERT. See Transfer Outage Data Using Oracle Utilities Network Management System (NMS).

In this section:

• About the Data Transfer Process

• Documentation Conventions and Common Data Formats

• Outage Management Data Transfer File Specifications

• Outage Date File Format and Name Conventions

About the Data Transfer Process

Transferring your data to Oracle Energy and Water generally involves the following phases:

• Sample historical file integration

• Full historical file integration

• Incremental file integration

In each phase, Oracle Energy and Water will work with you to integrate, validate, and approve each of these files. The files will contain the same columns, and will follow the same formatting and naming standards. The files will only differ in the number of customers included and the periods of time they cover.

Phase 1: Sample Historical File Integration

A sample historical data file based on the data specifications is sent to Oracle Energy and Water.

Oracle Energy and Water will share the data specifications with your technical team. Your team then generates a sample historical data file based on the specifications and sends it to Oracle Energy and Water. This sample file should allow Oracle Energy and Water to analyze and diagnose issues, and give feedback on how to provide an updated file. This process is repeated until a sample historical file passes diagnostic testing. It typically takes several rounds of sample file generation, analysis, and feedback to approve a sample historical file.

Phase 2: Full Historical File Integration

The process of generating, validating, and approving a full historical file begins after the sample file has passed validation.

After the sample file has passed validation, the process of generating, validating, and approving a full historical file can begin. This file needs to include actual production data for a specific timeframe. Full historical file approval typically requires several rounds of generation and validation. The approved historical data files will be loaded into the Oracle Energy and Water production application, and the data within it will be displayed in the Storm ERT user interface.

Phase 3: Incremental File Integration

Incremental files that include any new customer information and data recorded since the most recent record in the full historical file that was delivered are generated after the full historical data has been implemented.

After the full historical data has been implemented, your team will generate incremental files that include any new customer information and data recorded since the most recent record in the full historical file that was delivered. After the first set of incremental files are approved, your team will schedule an automated file transfer. During this transfer, your system will push ongoing incremental files to the Storm ERT cloud service.

> **Note:**
>
> The number of phases you need to follow may vary slightly depending on various factors such as how much data you have, how many resources are available to assist with the transfer, and so on.

Documentation Conventions and Common Data Formats

The data transfer documentation uses conventions to describe data fields in a consistent manner. Additionally, the data fields rely on common data formats, such as date, time, and Boolean values. These formats should be strictly followed so as to minimize errors in the data transfer process. Use the sections below to understand the conventions you will encounter and the data formats expected by Oracle Energy and Water.

Example and Allowed Values

Throughout the documentation you will see field descriptions that include **Example Values** or **Allowed Values** labels. The **Example Values** are meant to give you an idea or recommendation of the data you can send. However, you are not required to follow the examples. You can send other values instead.

The **Allowed Values** label denotes a set of values that is exhaustive and must be strictly followed. You must choose from the list provided, and cannot use other values.

Empty Fields and Null Values

Each field description in the documentation includes an indication of whether the field can be empty when you send data to Oracle Utilities. This is shown in the **Can Be Empty?** label.

If the label is followed by **Yes**, the field can be left blank or a value of NULL can be used.

If the label is followed by **No**, then a value must be provided or the data import will fail. A value of NULL is not acceptable in such cases unless the field has a default value that the system can revert to.

Date and Time Handling

All fields containing date or date time values must fully specify an exact point in time rather than a local date or date and time. The following table shows how Oracle Energy and Water will use default time and offset values if these are not provided:

Format	Description
`YYYY-MM-DD<T>hh:mm:ss-<timezone>`	The exact value specified will be loaded after adjusting the date time offset to UTC. Note that the offset itself will *not* be preserved. Time zones should be specified according to the **TZ database name** column in List of tz database time zones (Wikipedia). **Example:** `2007-06-05T12:30:00-America/New York`
	Oracle Utilities Opower uses the time zone to calculate the time in UTC, resulting in the value `2007-06-05T16:30Z` being stored in the system (where Z stands for Zulu or UTC time).

Outage Management Data Transfer File Specifications

There are four data files containing information about customer power outages which you will need to transfer to Oracle Energy and Water:

- Control Zone File
- Customer Information File
- Storm Information File
- Outage Information File

The order in you which you send the files to Oracle Utilities can be flexible. Not all four files necessarily need to be sent at the same time. Oracle Energy and Water will work with you to determine what is required for your setup.

Control Zone File

The Control Zone file represents the complete hierarchy of geographic areas in a service territory.

Control zones are the geographic areas or divisions in your utility service territory. Control zones are used to identify the areas in your service territory that have been impacted by a storm.

For example, control zone level 1 could be the name of your entire service territory, such as UtilCo. Control zone level 2 could be the major divisions within your service territory, such as UtilCo West, UtilCo East, or UtilCo Central. Control zone level 3 could then be a further subdivision. The more control zones you specify, the more granular your storm data can be to show where a storm is moving and having an effect.

> **✎ Note:**
>
> Even though data for only one zone is required, it is recommended that you provide data for two or three zones at minimum so that users of the Storm ERT application can have a more specific idea of where a storm is moving. Additionally, by including more zones in this file, you will provide users with more options to choose from when they create storm models and select the zones in their service territory that will be affected by the forecasted path of a storm. See Create a Storm Model for more information.

Column	Description
ZONE1	Level 1 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE2	Level 2 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE3	Level 3 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE4	Level 4 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE5	Level 5 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE6	Level 6 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE7	Level 7 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE8	Level 8 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE9	Level 9 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No
ZONE10	Level 10 control zone name. **Type**: VARCHAR2(64) **Can be Empty?**: No

Example Control Zone File

```
"ZONE1"|"ZONE2"|"ZONE3"|"ZONE4"|"ZONE5"|"ZONE6"|"ZONE7"|"ZONE8"|"ZONE9"|"ZONE1
0"
```

```
"UtilCo"|"Oracle City"|"Cloud Quarter"|||||||
"UtilCo"|"Oracle City"|"Cloud Quarter"|"Redwood"|"Redwood South"|||||
"UtilCo"|"Oracle City"|"Cloud Quarter"|"Redwood"|"Redwood East"|||||
```

Customer Information File

The Customer Information file contains data about all customers currently active in your information system.

Column	Description
CID	Unique customer identifier. **Type**: VARCHAR2(64) **Can be empty?**: No.
ACCOUNT_TYPE	Customer account type. **Type**: VARCHAR2(255) **Can be empty?**: No.
LATITUDE	Latitude of the customer device location. **Type**: NUMBER **Can be empty?**: No.
LONGITUDE	Longitude of the customer device location. **Type**: NUMBER **Can be empty?**: No.
ADDRESS	Customer address. **Type**: VARCHAR2(200) **Can be empty?**: Yes.
CITY_STATE	City, state part of the customer address. **Type**: VARCHAR2(50) **Can be empty?**: Yes.
ZIP_CODE	Zip or postal code part of the customer address. **Type**: VARCHAR2(10) **Can be empty?**: Yes.
DEVICE_CLS	Class portion of the customer device handle. **Type**: NUMBER **Can be empty?**: Yes.
DEVICE_IDX	Index portion of the customer device handle. This is a number to identify the specific device or device instance. **Type**: NUMBER **Can be empty?**: Yes.
DEVICE_NAME	Customer device name. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
METER_NUMBER	Customer meter number. **Type**: VARCHAR2(20) **Can be empty?**: Yes.

Column	Description
FEEDER	Customer feeder name or id. **Type**: VARCHAR2(64) **Can be empty?**: No.
RPT_LEVEL_1	Reporting level 1. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_1_TYPE	Label for reporting level 1. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_2	Reporting level 2. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_2_TYPE	Label for reporting level 2. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_3	Reporting level 3. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_3_TYPE	Label for reporting level 3. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_4	Reporting level 4. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_4_TYPE	Label for reporting level 4. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_5	Reporting level 5. **Type**: VARCHAR2 **Can be empty?**: No.
RPT_LEVEL_5_TYPE	Label for reporting level 5. **Type**: VARCHAR2 **Can be empty?**: No.

Example Customer Information File

```
"CID"|"ACCOUNT_TYPE"|"LATITUDE"|"LONGITUDE"|"ADDRESS"|"CITY_STATE"|"ZIP_CODE"|
"DEVICE_CLS"|"DEVICE_IDX"|"DEVICE_NAME"|"METER_NUMBER"|"FEEDER"|"RTP_LEVEL_1"|
"RTP_LEVEL_1_TYPE"|"RTP_LEVEL_2"|"RTP_LEVEL_2_TYPE"|"RTP_LEVEL_3"|"RTP_LEVEL_3
_TYPE"|"RTP_LEVEL_4"|"RTP_LEVEL_4_TYPE"|"RTP_LEVEL_5"|"RTP_LEVEL_5_TYPE"
"0987654321"|"Customer"|<LATITUDE>|<LONGITUDE>|"1 ORACLE ST"|"O"|"78741"|167|
1385345040|"MA:44AD:9463:BSV:1385345040"|12345678|"or_ac_lea"|"11385"|"Zip
Code"|"Q"|"Municipality"|"1234 ORACLE ST # 5 REDWOOD"|"County"||||
"0987654322"|"Customer"|<LATITUDE>|<LONGITUDE>|"3000 ORACLE 22ND
ST"|"M"|"78741"|167|1369183741|"JH:64AM:T54:BSV:1369183741"|
```

```
12345679|"or_ac_leb"|"11369"|"Zip Code"|"Q"|"Municipality"|"1000 ORACLE
LANE"|"County"||||
"0987654323"|"Customer"|<LATITUDE>|<LONGITUDE>|"54321 ORACLE AVE"|"R"|"78741"|
167|14185934|"SS:17F:32010:BSV:14185934"|12345677|"or_ac_lec"|"10014"|"Zip
Code"|"M"|"Municipality"|"2200 ORACLE AVE AUSTIN"|"County"||||
```

Storm Information File

The Storm Information file contains data about all the completed storms from your outage management system. This historical information can then be used to calculate estimated restoration timelines for new storms that come.

Column	Description
STORM_NAME	Storm name. This can be a casual name, such as Sally or Mark, or something based on an established convention in your organization. **Type**: VARCHAR2(65) **Can be empty?**: No.
STORM_TYPE	Storm type. This information will vary by utility. Oracle Energy and Water will work with you to define the values. Whatever STORM_TYPE values appear in the Storm Information file should be consistent with the storm types that are defined in the user interface configuration. For example, if you work with Oracle Energy and Water to configure the Storm ERT user interface to display storm type like "Thunder", "Tornado", "Flood", and "Snow", then the data sent to the STORM_TYPE field should match those values. **Example Values:** • Hurricane • Ice • Flood • Snow • Thunder • Tornado **Type**: VARCHAR2(32) **Can be empty?**: Yes.
STORM_LEVEL	Storm level or severity. This information will vary by utility. Oracle Energy and Water will work with you to define the values. Whatever STORM_LEVEL values appear in the Storm information file should be consistent with the "storm levels" that are defined in the user interface configuration. See Configure the Storm ERT Cloud Service for more details. For example, if you work with Oracle Energy and Water to configure the Storm ERT user interface to displays storm levels like "Minor", "Major", and "Severe", then the data sent in the STORM_LEVEL field should match those values. **Example Values:** • 1 - Minor • 2 - Major • 3 - Severe **Type**: VARCHAR2(32) **Can be empty?**: Yes.
STORM_START	Storm start date and time. **Type**: DATE. See Date and Time Handling for details. **Can be empty?**: No.

Column	Description
STORM_END	Storm end date and time. **Type**: DATE. See Date and Time Handling for details. **Can be empty?**: No.
ZONE1	Level 1 control zone for the storm. This information is similar to the information in the Control Zone File. The difference is that in this file, any zones specified are associated with a specific storm. **Type**: VARCHAR2(64) **Can be empty?**: No.
ZONE2	Level 2 control zone for the storm. This should be a subdivision of zone 1. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE3	Level 3 control zone for the storm. This should be a subdivision of zone 2. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE4	Level 4 control zone for the storm. This should be a subdivision of zone 3. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE5	Level 5 control zone for the storm. This should be a subdivision of zone 4. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE6	Level 6 control zone for the storm. This should be a subdivision of zone 5. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE7	Level 7 control zone for the storm. This should be a subdivision of zone 6. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE8	Level 8 control zone for the storm. This should be a subdivision of zone 7. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE9	Level 9 control zone for the storm. This should be a subdivision of zone 8. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE10	Level 10 control zone for the storm. This should be a subdivision of zone 9. **Type**: VARCHAR2(64) **Can be empty?**: Yes.

Example Storm Information File

```
"STORM_NAME"|"STORM_TYPE"|"STORM_LEVEL"|"STORM_START"|"STORM_END"|"ZONE1"|"ZON
E2"|"ZONE3"|"ZONE4"|"ZONE5"|"ZONE6"|"ZONE7"|"ZONE8"|"ZONE9"|"ZONE10"
"9/05/24 Southern Region"|"THUNDER"|"NONE"|"2024-09-05 13:00:00"|"2024-09-08
20:19:44"|"UtilCo"|"Oracle City South"|||||||||
"4/03/24 Southern Region"|"THUNDER"|"MAJOR"|"2024-04-03 16:00:00"|"2024-04-06
01:00:00"|"UtilCo"|"Oracle City South"|||||||||
"1/09/24 Southern Region"|"THUNDER"|"MAJOR"|"2024-01-09 23:00:00"|"2024-01-10
11:00:00"|"UtilCo"|"Oracle City South"|||||||||
```

Outage Information File

Outage information must be sent in two files: Outages and Outage Customers.

The Outages file contains information about outage steps. An outage step is a set of customers affected by an outage who have identical outage start and restoration times. Utilities often restore power in multiple steps, where some outages are restored to one set of customers in one step, and another set of customers is restored in the next step.

The Outage Customers file contains lists of affected customers for each outage step presented in the first file.

Outages

The outages file is meant to be a list of outage steps.

Column	Description
OUTAGE_ID	Outage identifier. **Type**: NUMBER **Can be empty?**: No.
STEP_ID	Outage step identifier (starts at 1). **Type**: NUMBER **Can be empty?**: No.
OUTAGE_TIME	Outage step start time. **Type**: DATE. See Date and Time Handling for details. **Can be empty?**: No.
RESTORE_TIME	Outage step restoration time. **Type**: DATE. See Date and Time Handling for details. **Can be empty?**: No.
NUM_CUST_OUT	Number of affected customers. **Type**: NUMBER **Can be empty?**: No.

Column	Description
DEVICE_TYPE	Outage device type (device class name). This is the device that the customer's meter is attached to, or what point of the electrical network is serving the customer. For most customers, it is a supply transformer. **Example Values**: • Example 1 • Example 2 **Type**: VARCHAR2(32) **Can be empty?**: Yes.
LATITUDE	Latitude of the outage device location. **Type**: NUMBER **Can be empty?**: Yes. However, it is recommended that you complete this field. Otherwise, the outage device location will not be known.
LONGITUDE	Longitude of the outage device location. **Type**: NUMBER **Can be empty?**: Yes. However, it is recommended that you complete this field. Otherwise, the outage device location will not be known.
CREWS	Comma-separated list of crews that worked on this outage. **Type**: VARCHAR2(4000) **Can be empty?**: Yes. However, it is recommended that you complete this field. Otherwise, the application will not be able to use this data to calculate accurate restoration rates.
ENROUTE_TIME	Time when the first crew was placed en-route to this outage. **Type**: DATE. See Date and Time Handling for details. **Can be empty?**: Yes. However, it is recommended that you complete this field if you are not populating ONSITE_TIME. Otherwise, the application will not be able to use this data to calculate accurate restoration rates.
ONSITE_TIME	Time when the first crew arrived onsite for this outage. **Type**: DATE. See Date and Time Handling for details. **Can be empty?**: Yes. However, it is recommended that you complete this field if you are not populating ENROUTE_TIME. Otherwise, the application will not be able to use this data to calculate accurate restoration rates.
ZONE1	Level 1 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: No.
ZONE2	Level 2 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE3	Level 3 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE4	Level 4 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.

Column	Description
ZONE5	Level 5 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE6	Level 6 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE7	Level 7 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE8	Level 8 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE9	Level 9 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
ZONE10	Level 10 control zone for the outage. **Type**: VARCHAR2(64) **Can be empty?**: Yes.
W_CUST_OUT	Weighted number of affected customers. **Type**: NUMBER **Can be empty?**: Yes. However, it is recommended that you complete this field. Otherwise, the application will not be able to identify the number of weighted customers who are without power. Weighted customers are those who are given a higher priority due to special circumstances (such as customers in a hospital or school).
FEEDER_NAME	Feeder name for the outage device. **Type**: VARCHAR2(64) **Can be empty?**: No.

Example Outages File

```
"OUTAGE_ID"|"STEP_ID"|"OUTAGE_TIME"|"RESTORE_TIME"|"NUM_CUST_OUT"|"DEVICE_CLS"
|"DEVICE_IDX"|"DEVICE_NAME"|"DEVICE_TYPE"|"LATITUDE"|"LONGITUDE"|"CREWS"|"ENRO
UTE_TIME"|"ONSITE_TIME"|"ZONE1"|"ZONE2"|"ZONE3"|"ZONE4"|"ZONE5"|"ZONE6"|"ZONE7
"|"ZONE8"|"ZONE9"|"ZONE10"|"W_CUST_OUT"|"FEEDER_NAME"
0101010|1|"2024-05-28 11:21:00"||7|123|
1234567890|"L20:32AI:69395:BSV:1234567890"|"bldg_towr"|||"56443"|"2024-06-28
16:01:46"||"UtilCo"|"Oracle City"|"Oracle Village"|"o-ov"|"l20"||||||5|"321"
0101011|1|"2024-05-28 11:46:00"||3|123|
1234567891|"SN:58AB:T182:BSV:1234567891"|"bldg_towr"|||||||"UtilCo"|"Oracle
City"|"Oracle Town"|"o-ot"|"o_ot_ot21s"|||||||1|"or_ac_le23"
0101012|1|"2024-05-28 12:46:00"||4|123|
1234567892|"PS:23M:56447:BSV:1234567892"|"bldg_towr"|||"54773"|"2024-06-28
16:15:06"|"2024-06-28 16:57:34"|"UtilCo"|"Oracle City"|"Oracle Village"|"o-
ov"|"o_ov_20s"|||||||2|"or_ac_le35
```

Outage Customers

List of customers associated with a row in the outages extract file.

Column	Description
CID	Unique customer identifier. **Type**: VARCHAR2(64) **Can be empty?**: No.
OUTAGE_ID	Outage identifier. **Type**: NUMBER **Can be empty?**: No.
STEP_ID	Outage step identifier. **Type**: NUMBER **Can be empty?**: No.

Example Outage Customers File

```
"CID"|"OUTAGE_ID"|"STEP_ID"
"0987654321"|0101010|1
"0987654322"|0101011|1
"0987654323"|0101012|1
```

Outage Data File Format and Name Conventions

All outage data files must be sent in a particular file format and transferred to Oracle Energy and Water using a standard naming convention.

File Format

All outage data files must be sent in a particular file format.

- All data must be sent as comma-enclosed, pipe-delimited text.

- Files must use UTF-8 encoding so that both Latin and non-Latin characters can be supported.

- All files must include a header row containing column names from the tables specified in this document. Header column names must exactly match the names specified in this data specification.

- All rows should have the same number of tabs even if some fields have null values. It is important that null values are represented by empty strings and not denoted by **/N**, **NA**, **null**, or another value.

File Name Conventions

All outage data files must be transferred to Oracle Energy and Water using a standard naming convention.

File name components enclosed in angle brackets (<>) must be populated. File name components enclosed in square brackets ([]) are optional and can be included or left out. Any components without brackets must be part of the file name and should not be changed.

Control Zone File

- <operating company>.zones.<yyyymmddhh24miss>.dat.<gz or gpg>

Storm Information File

- <operating company>.storms.<yyyymmddhh24miss>.dat.<gz or gpg>

Customer Information File

- <operating company>.customers.<yyyymmddhh24miss>.dat.<gz or gpg>

Outage Information File

- <operating company>.outages.<yyyymmddhh24miss>[.rst].dat.<gz or gpg>

- <operating company>.outage_customers.<yyyymmddhh24miss>[.rst].dat.<gz or gpg>

The naming convention is made up of the following components:

- **Operating Company**: A name or abbreviation that identifies the utility operating company sending the file. Oracle Energy and Water will work with you to choose the name early in the implementation process. The code needs to be a unique identifier in the Oracle Energy and Water system.

- **Extract Type**: The type of outage data extract. This will one of the following: outages, outage_customers, storms, zones, customers.

- **Extract Date and Time**: The timestamp when extract file was generated in format *yyyymmddhh24miss*.

- **File Extension**: All files should be gzipped and should end with *.gz*. If you choose to encrypt your files, then the *.gpg* extension should be used. In the case of encryption, compression is not required since the encryption process includes file compression. For outage extract files, the .rst suffix indicates that the file contains restored outages in addition to the active ones. Files can be up to one gigabyte compressed, or up to four gigabytes uncompressed.

4

Transfer Outage Data Using Oracle Utilities Network Management System (NMS)

If you are using Oracle Utilities Network Management System (NMS) to store and maintain outage data, then you can extract outage data from NMS using the Storm ERT Extractor. The Storm ERT Extractor provides a mechanism to extract and export from NMS the data needed by the Storm ERT product. This includes outage, control zone, storm, and customer data. See Storm ERT Extractor in the NMS documentation for more information.

5

Configure the Storm ERT Cloud Service

This section provides a summary of the configuration options available for the Oracle Energy and Water Storm ERT cloud service. In many cases, a configuration is a simple change that can be made to text that appears in the user interface. In other cases, a configuration is changing a default setting that updates how the product behaves or calculates a number used by the product.

- General Configuration
- Storm Model Configuration

The tables below describe the configuration options that are available. Work with Oracle Energy and Water to decide which configurations to make during the setup and launch of the Storm ERT product.

General Configuration

For each element listed in the table, indicate the desired configuration in the **Input Value** column. If you do not provide an input for optional configurations, the default will be used.

Configuration Option	Input Value
Full Title The full title of the cloud service. This is displayed in the dashboard of the application. **Default**: Estimated Restoration Time	Choose one of the following: • Use the default option. • Provide Oracle Energy and Water with a different full title.
Short Title Short title for the cloud service. This is displayed in multiple places, including the dashboard, the estimated restoration timeline creation screen, and other places in the user interface. **Default**: ERT	Choose one of the following: • Use the default option. • Provide Oracle Energy and Water with a different short title.
Timezone The local timezone of your utility's service territory. This is the timezone that will be displayed in the user interface when you are viewing information about a storm model and associated outage information. **Default**: EST5EDT	Choose one of the following: • Use the default option. • Provide Oracle Energy and Water with a different local timezone.

Storm Model Configuration

For each configuration listed in the table, indicate the desired configuration in the **Input Value** column. If you do not provide an input for optional configurations, the default will be used.

Configuration	Input Value
Seasons The start and end date for each season of the year. These dates are used to indicate a season based on the start and end date of a storm. The season is displayed in multiple places in the application, including the dashboard and storm model summary. **Default** • Winter: December 1 to February 28 (or 29 in a leap year) • Spring: March 1 to May 31 • Summer: June 1 to August 31 • Fall: September 1 to November 30	Choose one of the following: • Use the default options. • Provide Oracle Energy and Water with different season dates.
Storm Types The available types of storms. This information is used in multiple places in the application, including the dashboard, the storm model creation flow, and the storm estimated restoration timeline creation flow. **Default** • Flood • Hurricane • Ice • Snow • Thunderstorm • Tornado • Wind	Choose one of the following: • Use the default options. • Provide Oracle Energy and Water with different storm types.
Storm Levels The severity level of the storm. The meaning or criteria for each level may vary by utility. This information is used in multiple places in the application, including the dashboard, the storm model creation flow, and the storm estimated restoration timeline creation flow. **Default** • 1 - Minor • 2 - Major • 3 - Severe • 4 - Hazardous	Choose one of the following: • Use the default options. • Provide Oracle Energy and Water with different storm levels.

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