# Electricity Authority

Service Report and User Guide

May 2016

Prepared by Jade Operations

# Table of Contents

## Performance Standards

| Measurement | Requirement | Actual | Met | Rule Ref |
|---|---|---:|---|---|
| Number and detail of service provider rule or agreement breaches and details | Report delivered to EA detailing breaches | 0 | Yes | |
| Disaster recovery and backup obligations as set out in section 5 of operational requirements | | | Yes | Section 5 Operational Requirements |
| Number and details of participant rule breaches | Report on 1st business day delivered to EA SFTP directory | 01Jun16 at 03:01 | Yes | |
| Maximum number of concurrent users for month | | 1321 | Yes | |
| During regular service hours (0730 hours to 1930 hours each day), the provider must ensure that the system is available to participants for no less than 99.5 per cent of the time in any one month. This statistic considers that planned outages will not count against availability level targets. See 4.1 (f) and 4.3 of Operational Requirements.<br><br>**NOTE;**<br><br>**The actual percentage recorded is in accordance with the SPA.**<br><br>**The outages recorded were planned outages as agreed with the Authority.** | | 100.00% | Yes | Operational Requirements 4.1 a |
| Outside regular service hours (between 1930 hours and 0730 hours) the provider must ensure that the system is available to participants for no less than 98.0 per cent of the time in any month. This statistic considers that planned outages will not count against availability level targets. See 4.1 (f) and 4.3 of Operational Requirements. | | 100.00% | Yes | Operational Requirements 4.1 b |
| The Registry must use its best endeavours to provide a service availability of 99.8 per cent or better, with nil or minimal outages.<br><br>**NOTE;**<br><br>**The actual percentage recorded is in accordance with the SPA.**<br><br>**The outages recorded were planned outages as agreed with the Authority.** | | 100.00% | Yes | Operational Requirements 4.1 c |

| Measurement | Requirement | Actual | Met | Rule Ref |
|---|---|---|---|---|
| There must be no more than four unplanned outages in any one month | | 0 | Yes | Operational Requirements 4.1 d |
| There must be no more than two planned outages, undertaken only with prior approval from the Authority, per month.  However, under the amendments clause 4.1(f) of the operational requirements allows the Authority to approve additional outages where necessary.<br><br>Planned outages must be for no more than 2 hours' duration and must be undertaken outside regular service hours.  Planned outages do not include necessary daily housekeeping and can be excluded from the calculation of availability.<br><br>**NOTE;**<br><br>**The actual number of outages recorded is in accordance with the SPA.**<br><br>**The outages recorded were planned outages as agreed with the Authority.** | | 1) Scheduled outage 17 May for DR test.<br><br>2) Scheduled outage 19 May for DR test.<br><br>3) Scheduled outage 29 May for production application deploy and MS patching. | No | Operational Requirements 4.1 e |
| The Registry must measure service response time at regular intervals (every 1–5 minutes as agreed between the Authority and the provider) during the regular service hours | | | Yes | Operational Requirements 4.2 a |
| Response time will be measured by the provider executing a representative sample of simulated transactions from another host system, external to the Registry ISP, on the production system. The types of transaction to be used and the frequency of sampling will be agreed with the Authority | | | Yes | Operational Requirements 4.2 b |
| Service response time will be measured from the point at which a user transaction is executed to the point at which a valid response is received at the point the transaction originated | | | Yes | Operational Requirements 4.2 c |
| Ninety-five per cent of all sampled transactions will have a response time of less than 2 seconds and 80 per cent will have a response time of less than 1 second for all the components managed by the system at the delineation point of the Registry network | | <2 =99.86%<br><1 =99.68% | Yes | Operational Requirements 4.2 d |
| Help desk available | 7:30 to 19:30 hours each business day | 100% | Yes | Rule Ref none noted<br><br>Clause 11.20 |

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| Measurement | Requirement | Actual | Met | Rule Ref |
|---|---|---|---|---|
| Registry reports to participants day 1 09:00 | 09:00 hours on the first business day of the month | 31May2016 20:38 | Yes | Rule Ref Part E rule 19.1 Clause 11 of schedule 11.1 |
| Issuing of confirmation notices within 4 hours of receipt of information provided | | | Yes | Rule Ref Part E rule 22.1 Clause 11.21 |
| Number of customers changing retailers | 16:00 on the 6th business day of the month | | Yes | Rule Ref Part E rule 23.2 Clause 11.23 |
| Such other information as may be agreed from time to time between the Registry and the Board [*3] | 16:00 on the 6th business day of the month | | Yes | Rule Ref Part E rule 23.3 Clause 11.23 |
| Reports to the clearing manager and systems manager by 16:00 on first business day of the month | 16:00 on first business day | 01Jun2016 00:15 | Yes | Rule Ref Part E 24.1 Clause 11.24 |
| By 16:00 on 4th business day deliver to the reconciliation manager the ICP days report | 16:00 on 4th business day | 02Jun2016 01:45 | Yes | Rule Ref E 24.2.1 Clause 11.26 |
| By 16:00 on 4th business day deliver to the reconciliation manager the loss factors report | 16:00 on 4th business day | 02Jun2016 00:00 | Yes | Rule Ref E24.2.2 Clause 11.26 |
| By 16:00 on 4th business day deliver to the reconciliation manager the balancing area report | 16:00 on 4th business day | 02Jun2016 00:00 | Yes | Rule Ref E 24.2.3 Clause 11.26 |
| By 16:00 on 4th business day deliver to the reconciliation manager the half hour identifiers report | 16:00 on 4th business day | 02Jun2016 04:51 | Yes | Rule Ref E 24.2.4 Clause 11.26 |
| By 16:00 on 1st business day deliver to the market administrator (EA) a report summarising event that have not been notified to the Registry with specified time frames | 16:00 on 1st business day | 01Jun2016 00:01 | Yes | Rule Ref E24.3 Clause 11.27 |
| Copies of reports provided | Within 4 hours of request during business hours | | Yes | Rule Ref E25 Clause 11.28 |

| Measurement | Requirement | Actual | Met | Rule Ref |
|---|---|---|---|---|
| Notifications or change within the Registry to participants affected | Same day | | *Yes* | Rule Ref E26<br><br>Clause 11.29 |
| Registry to publish schedule of loss category code and loss factors | Within one day of notification of change | | *Yes* | Rule Ref E1 rule 5.5<br><br>Clause 21 of schedule 11.1 |
| Registry to publish schedule of mapping between NSP's and balancing areas | Within 1 business day of notification of change | | *Yes* | Rule Ref E1 rule 7.3<br><br>Clause 24 of schedule 11.1 |
| Registry to publish schedule of all NSP identifiers and supporting information | Within 3 business days of notification of change | | *Yes* | Rule Ref E1 rule 8.3<br><br>Clause 30 of schedule 11.1 |

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## Adhoc Reporting Statistics

| Report | Run | Complete | Average time (seconds) |
|---|---|---|---|
| Change Network Creation Date | 2 | 2 | 0.7 |
| Distributor Maintenance | 1043 | 1043 | 13.9 |
| Metering Maintenance | 3818 | 3818 | 7.6 |
| NSP Mapping Maintenance | 30 | 30 | 4.6 |
| Report - Breach Current | 260 | 260 | 3.5 |
| Report - Current Details | 130 | 130 | 567.2 |
| Report - Event Detail | 26206 | 26204 | 82.0 |
| Report - File Handler Status | 1 | 1 | 0.1 |
| Report - ICP List | 3070 | 3070 | 253.5 |
| Report - Loss Factor Codes | 3 | 3 | 15.9 |
| Report - Maintenance Breach | 6 | 6 | 5.9 |
| Report - Metering Installation Information | 49 | 49 | 1548.7 |
| Report - Missing Metering Data | 17 | 17 | 541.3 |
| Report - NSP Mappings | 5 | 5 | 7.0 |
| Report - Switch Breach History | 182 | 182 | 33.7 |
| Request - Switch Resend | 103 | 103 | 0.7 |
| Switch AC | 657 | 657 | 0.6 |
| Switch AN | 8570 | 8570 | 1.0 |
| Switch AW | 2187 | 2187 | 3.7 |
| Switch CS | 9357 | 9357 | 7.2 |
| Switch MN | 333 | 333 | 2.3 |
| Switch NT | 12639 | 12639 | 1.2 |
| Switch NW | 2255 | 2255 | 1.2 |
| Switch RR | 1056 | 1056 | 0.5 |

| Report | Run | Complete | Average time (seconds) |
|---|---|---|---|
| Trader Maintenance | 1007 | 1007 | 41.0 |
| Totals | 72986 | 72984 | 45.0 |
| Change Network Creation Date | 2 | 2 | 0.7 |
| Distributor Maintenance | 1043 | 1043 | 13.9 |
| Metering Maintenance | 3818 | 3818 | 7.6 |
| NSP Mapping Maintenance | 30 | 30 | 4.6 |
| Number of Reports successfully Re-Processed | 14 | | |

## Batch File Statistics

| Total | Complete | Completed by 07:30 | Not completed by 07:30 |
|-------|----------|--------------------|------------------------|
| 71484 | 71482 | 71478 | 2 |

| | |
|---|---|
| Details of Batch File Reports not completed by 07:30 Report | Report - Event Detail  Participant: ███  Arrival: 02/05/2016 15:55:24  Start: 02/05/2016 15:56:29  End: 03/05/2016 11:55:22  Elapsed: 71933.1 seconds  Processor: DFP3 Report - Event Detail  Participant: ███  Arrival: 18/05/2016 15:58:36  Start: 18/05/2016 15:58:47  End: 19/05/2016 12:47:34  Elapsed: 74926.9 seconds  Processor: DFP2 |

## Other Information

The following reports/files are supplied to the EA by the 6th working day of each month (unless otherwise specified) to the SFTP server:

- ICP's energized, de-energized, decommissioned and switched by Retailer and NSP

- ICP's energized, de-energized, decommissioned and switched by Retailer

- ICP's energized, de-energized, decommissioned and switched by Distributor

- Report PR-130 as defined in functional specification

- Details of participant rule breaches (supplied on first business day)

- Details of participant switch breaches (supplied on first business day)

## Summary Of Incidents

There were no incidents.

## Development Access

Jade Development staff have continuous access to the Production Electricity Registry System for support purposes.

| Staff Member | Date accessed |
|---|---|
| Peter Smith | |
| Greg Matthews | |
| Pieter Bremmers | |
| Laura Jarquin | |
| Julian Brown | |
| Patrick Gleeson | |

## Software Related Fixes

| ID | Description | Response |
|---|---|---|
| ER-531 | Web service address inquiry call caused string too long error. Delimiters applied automatically to the GUI do not apply to web service calls. Modify to ensure a max length string is not passed to the search agent | Patched in release 16.05 (29/05/2016) |
| ER-519 | Clean up of invalid MN breaches from part10 transition | Patched in release 16.05 (29/05/2016) |
| ER-518 | Clean up 4 minor transient object leaks | Patched in release 16.05 (29/05/2016) |
| ER-509 | Spelling error on functional specification switching diagram (documentation only) | Patched in release 16.05 (29/05/2016) |
| ER-502 | Correct an invalid NSP mapping setup for a test/dummy participant in UAT | Patched in release 16.05 (29/05/2016) |
| ER-483 | Enhancement: supplement existing stats gathering to identify exact transaction details | Patched in release 16.05 (29/05/2016) |
| CR-1189 Monthly alert report to the Authority | | |
| In the Authorities monthly alert report (NP-060) consolidate alerts generated for the same ICP for the same circumstances into a single alert | | |

## Data Fixes

Number and details of incidents requiring data fixes.

| ID | Description | Severity | Response |
|---|---|---|---|
| ER-519 | Script run to remove invalid MN breaches (1 June) | Low | Resolved |

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## Schedule Of Faults Raised

A summary of faults raised during the month.

**Note** that a change to the Jira instance during October 2014 has meant that the ID and Severity fields have changed. ID has changed from PR-xxx to ER-xxx and Severity has changed from 1-5 to Low, Medium, High and Critical.

| ID | Description | Severity | Response |
|---|---|---|---|
| ER-531 | String too long error received in address search Web Service | Low | Unresolved |
| ER-530 | FTPTransferAppC terminated unexpectedly | Low | Fixed |
| ER-529 | Levy report numbers do not appear to be correct | Medium | Unresolved |
| ER-528 | Online NT switch allows MN type to be selected | High | Unresolved |
| ER-527 | Cleanup incorrect NSP start dates on 2 entries | Low | Unresolved |
| ER-526 | Amend front logon page information | Low | Unresolved |
| ER-525 | CR-1189 monthly alerts single entry per ICP | Low | Fixed |
| ER-524 | NHH switch on a site that only has HHR capabilities | Medium | Unresolved |
| ER-523 | Legacy metering use of interim certification | Low | No Problem Identified |
| ER-522 | Archive process - moving files from archive to archiveToDvd directory | Low | Unresolved |
| ER-521 | Copy EMCO in on the PR-100 reports | Medium | Unresolved |

# Server Disk Utilisation

### MARAKLS3 (Production - MARPREG application)

| Server | Drive | Content | Size (GB) | GB Available | Prior Period |
|--------|-------|---------|-----------|--------------|--------------|
| MARAKLS3 | C | Operating System | 100 | 22 | 30 |
| | R | JADE Database | 1331 | 733 | 704 |
| | U | JADE Journals (logs) | 300 | 218 | 222 |
| | V | Backup | 1869 | 659 | 624 |

### MARCHCS1 (DR-MARPREG secondary)

| Server | Drive | Content | Size (GB) | GB Available | Prior Period |
|--------|-------|---------|-----------|--------------|--------------|
| MARCHCS1 | C | Operating System | 136 | 71 | 71 |
| | R | JADE Database | 1166 | 572 | 550 |
| | U | JADE Journals (logs) | 300 | 222 | 213 |
| | V | Backup | 1748 | 1157 | 1134 |

### MARCHCS3 (Test - MARUREG Primary Application, MARUREG secondary)

| Server | Drive | Content | Size (GB) | GB Available | Prior Period |
|--------|-------|---------|-----------|--------------|--------------|
| MARCHCS3 | C | Operating System | 158 | 71 | 71 |
| | R | JADE Database | 2012 | 1396 | 1398 |
| | U | JADE Journals (logs) | 400 | 357 | 323 |
| | V | Backup | 3014 | 1173 | 1184 |

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## Database Transactions Production
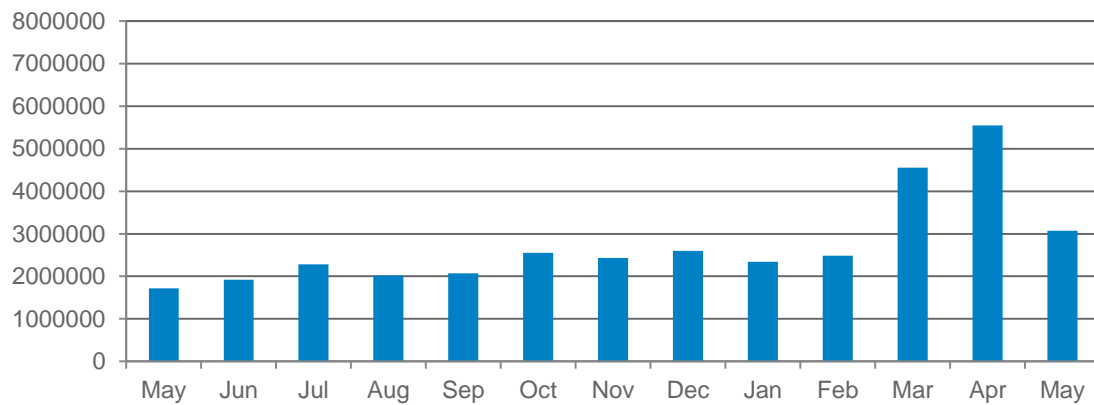


**NOTE re March;** The large number of web service calls to the Registry from the Retail Data project API Manager caused the increase in database transactions as shown in the graph above.

## Database Size Production (GB)
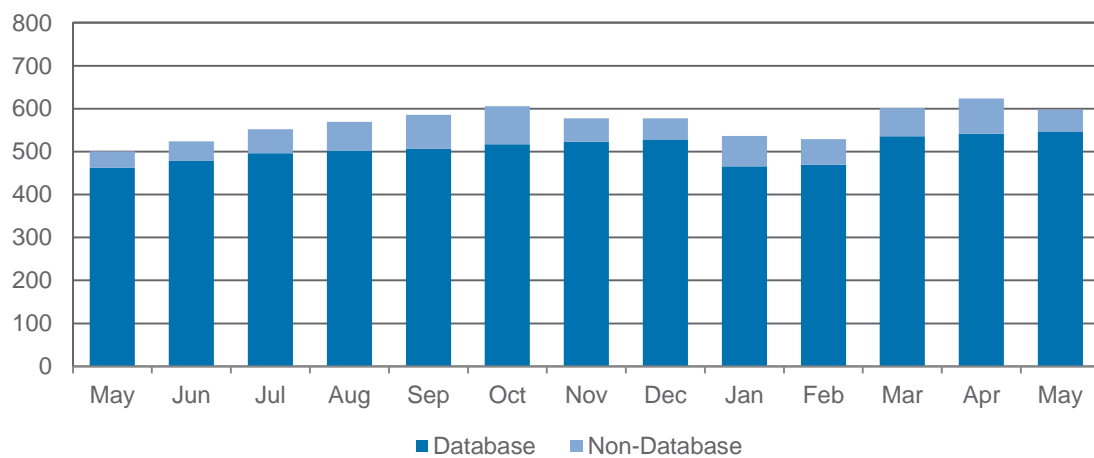
## Service Disruptions

There were no recorded operational incidents during the period. Scheduled outages are excluded from the calculation of the Availability Percentage.

| Performance Measure | |
|---|---|
| Availability | 100.00% |
| Number of Scheduled Outages | 3 |
| Number of Unscheduled Outages | 0 |
| Last Unscheduled Outage | Mar 2016 |

## Application Release Activities

| Day | Ref | Detail | Duration hh/mm | Authoriser |
|---|---|---|---|---|
| 17May16 21:00 | 589228 | DR test (Akl to Chc) | 00:34 | Grant Benvenuti |
| 19May16 21:00 | 589235 | DR test (Chc to Akl) | 00:32 | Grant Benvenuti |
| 29May16 21:00 | | Release 16_05 | 00:16 | Joel Langley |

## Other Activities

| Day | Detail | Duration hh/mm | Authoriser |
|---|---|---|---|
| | | | |

## Managed Components

| Name | Type |
|---|---|
| MARAKLS3 | Production Database Server |
| MARCHCS1 | DR Database Server Secondary |
| MARCHCS3 | Test Database Server |
| CNWAKLS205 | Web Server |

| Name | Type |
|------|------|
| MARPREG | Production System |
| MARUREG | UAT System |

## Transaction Volumes

| Transaction name | This Month | Last Month | Percentage Change |
|------------------|-----------|-----------|-------------------|
| All Transactions | 3,073,843 | 5,549,427 | -44% |

## Database Growth

| Class | This Month MB | Last Month MB | Change MB |
|---|---|---|---|
| Database | 560,160 | 555,020 | 5,140 |
| Non-database | 51,434 | 83,892 | -32,458 |
| **Total** | **611,594** | **638,912** | **-27,318** |

## Backup Performance Production

| Backup Type | Run days | Run Time | Expected Duration hh/mm | Tape Restore Test Date |
|---|---|---|---|---|
| Disk | ALL | 20:00 | 01:15 | 08May16 |
| Tape | ALL | 01:00 | 05:00 | |

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## Electricity Authority Contact Information

The customer operations contacts are for Jade Care personnel to contact the Electricity Authority staff for day-to-day procedures or any unexpected events.

| Contact Name / Role | Contact Details |
|---|---|
| **Manager Market Operations** | Grant Benvenuti<br><br>P:  04 460 8849<br><br>M:  027 652 4854<br><br>E:  grant.benvenuti@ea.govt.nz |

## Jade Care Contact Information

| Role | Contact Details |
|---|---|
| **Central Systems**<br><br>Central Systems is the single point of contact for Jade Care. Central Systems will co-ordinate the involvement of the necessary staff from elsewhere in the Jade organisation. | E:  csystems@jadeworld.com<br><br>P:  0800 65 22 66 or<br>+64 3 365 22 66 or<br>+64 21 225 8122<br><br>A:  Jade Software Corporation<br>21 Sheffield Crescent<br>P.O. Box 20159<br>Christchurch, New Zealand |
| **Client Services Manager**<br><br>The Client Services Manager provides a more formal channel of communications between the two organisations. The Client Services Manager is responsible for scheduling non-routine activities with the customer, acts as the primary point of fault escalation and also produces the monthly reporting. | David Burt<br><br>E:  dburt@jadeworld.com<br><br>P:  03 367 8337 – Office<br>021 225 8137 – Mobile |
| **Business Manager**<br><br>The Business Manager takes overall responsibility for the customer relationship with Jade. | Richard Cattell<br><br>E:  rcattell@jadeworld.com<br><br>P:  09 600 6326 – Office<br>021 834 877– Mobile |

## Automated Fault Escalation Profiles – Priority A Incidents

In the event of a "priority A incident" where the hardware or the application has an unscheduled outage the Electricity Authority has advised that escalation via email or text is not required.

However, if there is an unusually long outage impacting participants, then Grant Benvenuti would like to be contacted.

# Agreed Procedures

## Change Control

All significant changes will be notified to the Electricity Authority, and a Tracker work request will be created to record authorisation, schedule, and implementation detail.

Change requests must be approved within 1 month of the request being submitted.

In exceptional circumstances, for example where Jade Care consider server integrity to be under significant and immediate threat, changes may be applied with little or no notice.

## Application Release Authorisation

Releases are automated through the Jade Care toolset. Submission and authorisation are separate functions, and the authorisation facility may be extended to the Electricity Authority, or may be applied by the Client Service Manager where the Electricity Authority chooses not to use this facility.

## Application Restarts

Requests for restart of applications or servers must be made in writing. In exceptional circumstances, and where the requestor is known to Jade Care staff, a verbal request may be sufficient, provided it is confirmed in writing shortly after the request is made.

## Hardware Fault Reporting

SNMP traps will be enabled for all servers. Traps will result in alerts being raised at Jade Care and Tracker incident records being created. Automated escalation can be applied to these calls to alert the Electricity Authority and third parties to the event.

Arrangements may be put in place to allow Jade Care to contact hardware service organisations directly in the event of hardware issues. Contact and call identification details will be required as a prerequisite to implementation.

## Anti-Virus Product

Anti-virus product is installed on all managed servers. Engine and pattern updates are applied on receipt, and full scans are run weekly.

## Recovery Procedures

### Application Recovery

The environments are set up to perform automatic application recovery in the event of a server undergoing a non-scheduled restart.

If there is a physical failure on the hardware where the VM is hosted on, the VM will be moved to a different physical VMware host. In the event of a catastrophic site failure, an SDS takeover will occur to the DR site upon approval by the Electricity Authority.

### Server Recovery

Server recovery should never take place unless agreed by the Electricity Authority, Jade Care and hardware service representatives.

If a server operating system needs to be rebuilt, Central Systems will assist the onsite technician in rebuilding the server configuration and operating system to a state where Jade Care access is restored. Recovery of the full configuration, the applications and other third party software will be undertaken by Jade Care.

## Server Integrity

The Electricity Authority servers are configured and maintained to Jade Care standards. This configuration is critical to the operation of the process automation and monitoring software.

It is essential that all changes to the server or application software is either performed by, or with the fore-knowledge and agreement, of Jade Care.

## Reporting

### Systems Management Report

This systems management report is to be provided by email to customer staff as advised from time to time. The target date for delivery is the 5th working day of the month following the calendar month to which the report relates.

### Incident Reports

An incident report will be prepared for each unscheduled outage and will be emailed to customer staff as advised from time to time within 3 working days of any outage.  These reports relate only to those items managed by Jade Care; e.g. network issues and hardware failures will not be subject to a report.

### Jade Care Recommendations

Where Jade Care has recommendations for changes to hardware or the operating environment, these recommendations will be submitted to the Electricity Authority management. Implementation of such recommendations will be formalised through the change control process, and documented through the systems management report in summary form.

## Software Licences and Media Storage

All software media and licences must be kept in secured storage in reasonable proximity to the servers.

## Replication Technologies

The use of replication technologies such as Volume Shadow Copy Service (VSS) and VMware copy processes with JADE databases is NOT supported and must not be used. The Jade Care service provides automated scheduled backups.

## Personnel and Contact Details

The Electricity Authority must advise Jade Care of changes in personnel and contacts details where individuals are named as direct contacts. Fault escalations are pre-defined and automated to individual email addresses and SMS capable devices. Leave coverage and personnel changes must be advised for these functions to be effective.