datacentrealliance ■■■

The Data Centre Industry Association

DCA Certification of Data Centres – Requirements V1.6

Contents

1. Change Control

Author: Simon Campbell-Whyte

Contributors: DCA Technical Council, DCA Board of Governors, DCA Accreditation Board

Version	Description	Date
V1.0	Initial Release - Previously part of 3.74	01/03/2013
V1.01	Amendments made to wording SH	03/06/2013
V1.02	Editorial correction to table row numbering (line 99) as advised by stakeholder	04/02/2014
V1.5	Alignment to CENELEC EN50600 Series & changes to "Design Only" requirements	23/03/2015
V1.6	Amendment to correct an inconsistency pertaining to DCA EU Code of Conduct status (requirement for Participant status within EU)	29/05/2015

2. Introduction

This document describes the requirements and sign off metrics under the DCA Certification scheme. The user should refer to the DCA Certification Guidelines document for more details of the process and management of the scheme.

3. Data Centre Resilience classification and design goal – Sign-Off Metrics for operational data centres

The Classification is based on the resilience objective of the data centre and assesses the Power, Environmental Control and Telecommunication cabling elements. For more information of resilience classifications please refer to your local standards authority. Checklist (for operational data centre Certification) (carried out by the DCA and the Approved Auditing firm)

1	What is the resilience classification of the data centre? (This should be according to CENELEC EN50600 series. If outside Europe another recognised Standard may be used if preferred, provided it can be confirmed as the jurisdiction and Standards Organisation in force within the relevant country or region)	Resilience class of the data centre
2	Resilience Standard Used (please state the reference to Standard used to specify the Resilience classification) e.g. CENELEC EN50600 Series	Required Information
3	Does the technical design of the facility deliver this classification?	Required verification
4	Is the technical design deployed at the site successfully?	Required verification
5	Is the resilience strategy defined by the classification to be maintained at the facility for two years?	Required verification

Supporting evidence and information required by the DCA for an operational data centre certification:

5	Size of technical areas in square feet or sq meters	Required Information
6	Brief description of the data centre's role and purpose E.G. colo facility, private or corporate facility	Required Information

7	High level topology drawing of data centre power infrastructure including:
	    o HV Feeds, description of terminating sub-stations and topology of design through switch gear to UPS to PDU
	    o Backup generators including power ratings
		Required Information

8	High level topology drawing of the data centre utility	Required Information

	including telecommunications and cabling, this should show any external Fibre ISP or uplinks and illustrate how this is distributed to IT equipment racks or cages.	
9	High level topology drawing of the data centre cooling system(s) the drawing should include sufficient capacity information to illustrate the stated resilience level and scalability levels if relevant	Required Information

4. Operational Management and Maintenance – Sign-Off Metrics

The DCA will be certifying that the Data Centre is operated and maintained in accordance with its resilience level, purpose and design goal. The DCA also certifies that at the time of audit that staff resources are deployed with the correct expertise at the appropriate depth to maintain the data centre designed resilience strategy and business purpose.

Checklist for fully operational data centre (carried out by the DCA and DCA Approved Auditing Firm)

10	Is a maintenance strategy in place that is in line with overall data centre designed resilience class and business purpose (the "Maintenance Policy")?	Required verification
11	Does the Maintenance Policy include the appropriate fault detection and resolution procedures?	Required verification
12	Is the Maintenance Policy deployed to all relevant staff and departments and backed by board of directors?	Required verification
13	Does the Maintenance Policy include appropriate change control and is this maintained with auditable records in place?	Required verification
14	Is the correct fire detection and prevention hardware, systems, surveillance and monitoring equipment deployed to maintain appropriate fire detection and prevention?	Required verification
15	Please specify staff training and professional development strategy for human resources	Required Information

5. Physical Security and Access Control – Sign-Off Metrics

The DCA will be certifying that the data centre has and maintains a physical security policy that is appropriate for the data centre's purpose and design goal which can respond to changing threats. It also certifies that at the time of audit, the data centre has the staff resources, trained to the correct levels and that the correct security equipment is in place to deploy and enforce the Security Policy at all times.

In addition to the above, customers will then know there is a physical security policy in place at the data centre that they can examine to see if consistent with their business's requirements and that it is maintained with auditable records that can also be reviewed.

Checklist for fully operational data centre (carried out by the DCA and DCA Approved Auditing Firm)

15	Is the Facility ISO27001 certified?	If YES go to 16 only. If No Answer 17-20
16	Copy of ISO Certificate	Required Information (if Yes to above)
17	Is a risk identification, assessment and threat mitigation strategy (the "Physical Security Policy") consistent with the data centre purpose, in place and backed by the board of directors?	Required verification for non-ISO27001 certified facilities only
18	Is the Physical Security Policy regularly reviewed and adequately able to respond to changing threats?	Required verification for non-ISO27001 certified facilities only
19	Are staff deployment levels adequate to maintain the Physical Security Policy at all times?	Required verification for non-ISO27001 certified facilities only
20	Is the correct physical security hardware, systems, surveillance and monitoring equipment deployed to maintain and enforce the physical security policy?	Required verification for non-ISO27001 certified facilities only

6. Energy Efficiency – Sign-Off Metrics

The DCA recognises the need to drive down waste and manage energy resources effectively and responsibly. It is also well documented that to do this coordinated action is needed involving all stakeholders within the organisation. The EU code and the Green Grid Maturity model are both well established and accepted methodology, DCA defines accordance with one or preferably both as the minimum standard currently expected. Therefore DCA Certifications can only be granted if this minimum standard is deployed and maintained. These documents provide advice and special provisions for colocation or 3rd party service providers. Both documents are freely available to download for self-implementation. Please note it is necessary for applicants where the data centre is within the jurisdiction of the

European Union, to be an EU Code of Conduct "Participant" in order to gain DCA Certification. However, being listed and accepted a "participant" does not confirm the energy efficiency strategy is deployed and maintained and therefore does not guarantee a DCA certification. If the application is for a data centre located outside the European Union where "Participant" status is not available, the EU Code of Conduct if deployed correctly will be accepted. Other energy efficiency technical reports, standards or best practice guides in other jurisdictions may be accepted – please check with the DCA Approved Auditor before application.

Checklist for fully operational data centre (carried out by the DCA and DCA Approved Auditing Firm).

21	Site Energy Efficiency: Has the data centre adopted an energy efficiency strategy?	Required Verification
22	The data centre must specify ONE of the following as the deployed strategy: a) EU Code of Conduct Ver 6 (2015) or later b) Or Equivalent (must be specified) Please note if site is located in EU, "Participant" status is required	Required Information
23	Is the energy efficiency strategy in place, maintained correctly and backed by the board of directors?	Required Verification

6.1   PUE Reporting

Power utilisation Effectiveness or PUE is a KPI used to measure the overall distribution and utilisation of power consumed by the facility over a 12 month period. The DCA recognises that this KPI is misused as a KPI for overall energy efficiency of a given data centre irrespective of the utilisation or usefulness of IT hardware/software, chosen resilience strategy, and load. Therefore the DCA does not recognise a PUE figure as a metric able to measure efficiency. However it can provide a useful indication of the performance of the data centre infrastructure if measured correctly. If PUE figures are quoted by the data centre's owner, operator or it representatives then the PUE MUST be measured in accordance with the relevant Standard (ISO30134 part 2) or as specified by the Green Grid.

24	PUE Report (Annual) (e.g. 1.8)	Optional
25	PUE Category	Optional
26	Is the PUE publically available information?	Optional
27	Specify other resource efficiency or effectiveness KPI's measured at the facility (if any)	Optional

7. Site Visit/Tour – Sign-Off Metrics

The DCA is required to verify the documentary evidence against a high level site review or tour. The site review requires experience of access control, inspection of external and

internal critical systems, and viewing of a technical area with live racks and an overview of the BMS operational desk area. Duration of the site review is approximately 2 hours. A suitable time and date is to be arranged for a member of the DCA Accreditation Board to carry out the inspection, he/she must be accompanied by a member of the auditing firm.

A Site Inspection Output Form will be provided to, and completed by the relevant DCA Accreditation Board representative.

This process is also repeated at the mid-term of the Certification award (after 1 year of award) where a DCA Accreditation Board member will carry out an **Annual Surveillance** visit.

8. DCA Design only Certification – Sign-Off Metrics for design documents

Checklist for design only data centre Certification (carried out by the DCA and auditing firm and supplied to the DCA with the certification application). Please note Design only Certification only verifies that the design and strategy, if carried out as proposed will meet the requirements of the DCA Certification, is **DOES NOT** verify that the technical design will function, or is fit for purpose. In addition the design Certification will expire after 2 calendar months after the data centre becomes fully operational, at which point an application for a fully operational Certification must be made.

1	What is the resilience DCA classification of the data centre design? (This should be according to CENELEC EN50600 series. If outside Europe another Recognised Standard can be used that can be confirmed as within the jurisdiction in force within the relevant country or region)	Resilience class of the data centre
2	Resilience Standard Used (reference to Standard used to specify Resilience classification) e.g. CENELEC EN50600 Series	Required Information
3	Will the intended technical design of the facility deliver this classification?	Required verification
4	Size of technical areas in square feet or sq meters	Optional Information
5	Desired power density per rack cabinet	Optional Information
6	Brief description of the intended data centre's role and purpose, e.g. colocation facility, private or corporate facility	Required Information

7	High level topology drawing of data centre power infrastructure including:
	   o HV Feeds, description of terminating sub-stations and topology of design through switch gear to UPS to PDU
	   o Backup generators including power
		Required Information

	ratings	
8	High level topology drawing of the data centre utility including telecommunications and cabling, this should show any external Fibre ISP or uplinks and illustrate how this is distributed to IT equipment racks or cages.	Required Information
9	High level topology drawing of the intended data centre cooling system(s) the drawing should include sufficient capacity information to illustrate the stated resilience level and scalability levels if relevant	Required Information
10	Overview of the energy management enablement and methodology intended to measure and control energy efficiency	Required Information
11	Please specify Energy Efficiency best practices (and version) to be deployed and carried out at the proposed facility	Required Information
12	Describe and list both the mandatory and optional EU code of Conduct for Data Centres (Energy Efficiency) best practices for new build facilities that have been implemented within the design.	Required Information
13	Overview of the intended access control and perimeter security systems	Required Information
14	Overview of the intended operations and maintenance strategy to be deployed at the facility	Required Information
15	Overview of the intended staff training scheme and professional development strategy to be deployed at the site.	Required information

Please note that a Design Only Certification expires after 2 calendar months have elapsed from the date of the data centre becoming fully operational – Fully Operational is defined as a completed data centre project handed over to the owner/operators, with live IT systems in racks.