



# ICT Communications Room Deep Clean Specifications

Version 2020.1.0 - Final



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# Please Read

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## IMPORTANT COMPLIANCE REQUIREMENTS

*Note: The following instruction applies to all documents in this library.*

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This is a controlled document and is reviewed on an annual basis. The last review was carried out on September 2019. If you are viewing this document after September 2020, you will need to contact the sender to confirm you are working from the latest revision.

It is the responsibility of the contractor/vendor to read and adhere to the procedures, processes and guidelines set out in the following document when quoting for or carrying out work for ACT Health Directorate (ACTHD).

If you have questions or require clarification of any of the procedures, processes or guidelines in the following document please contact the sender of the document in writing with your questions so that a formal response can be provided. If any specific requirement is unclear, it is expected that clarification will be sought from the Health Digital Solutions Division (DSD) – Information and Communications Technology (ICT) architect(s), rather than a decision made and a design implemented and based on unclarified assumptions.

These standards are applicable to ALL Canberra health Services (CHS) and ACTHD sites or any work funded by ACTHD (e.g. Calvary, ACTHD provided Non-Government Organisation (NGO sites) unless specifically exempt.

All Greenfield Health sites are expected to be fully compliant with all appropriate standards.

Brownfield Health sites undergoing refurbishment should be fully compliant unless an exemption is provided by DSD Infrastructure Hub.

In the event of any design non-compliance issues, a Departures document must be completed and submitted to DSD Infrastructure Hub. These issues should be resolved, in consultation with DSD Infrastructure Hub, as soon as possible within the project process and explicitly prior to site handover.

While some test cases have been cited within these documents as examples, the list is not exhaustive, and all appropriate test procedures shall be formulated, approved prior to testing and testing shall be performed by the client system administrators before full acceptance can be signed off by the Director of ICT Infrastructure Hub.

### **IMPORTANT:**

**Any departure from the standard, whether intentional or in error shall require a completed Departures Document to be submitted to DSD infrastructure Hub for approval.**

**Any non-compliant designs without a pre-approved Departures Document by completion of the project or a nominated milestone or gateway, will require remediation by the Head Contractor at the Head Contractors cost.**

## Document review high level

(to review detailed document updates [click here](#))

Version	Summary of Changes	Author	Date
2020.1.0	Released version	Nitin Saxena	30/03/2020

## Document references

Document	Version	Location

## Document default review cycle

(to be review every 12 months from the release date)

Date	Version	Comments
Mar 2020	2020 1.0	Original release date
Mar 2021		(Next review date)

## Document Owner

Name	Location
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# Contents

1. Introduction .....	6
1.1. Context and Background.....	6
2. Deep Clean Considerations .....	7
2.1. Description .....	7
2.2. Timeframe Requirements .....	7
3. Deep Cleaning Requirements .....	8
3.1. Communications Room Floor.....	8
3.2. Equipment and Surfaces - General .....	8
3.3. Data Cabinets .....	8
3.4. Patch Panels .....	9
3.5. Structural Surfaces .....	9
3.6. Ceiling.....	9
3.7. Subfloor.....	9
3.8. Air conditioners.....	10
4. Compliance Requirements.....	11
4.1. Certification, Standards and Checklist .....	11
4.2. Inclusion in the Project Plan.....	11
Appendix A : References and Amendment Log.....	12
Glossary of terms .....	12
Amendment history .....	12
Table 1 - Glossary of terms .....	12
Table 2 - Amendment History .....	12

# 1. Introduction

## 1.1. Context and Background

A building site generates significant amount of debris and dust during construction which can have major impact on the ICT equipment installed within the communications rooms. Elimination of Gyprock™ dust from walls, concrete dust, sawdust, residue and other coarse construction debris is essential for properly preparing a new room for ICT equipment installation. After construction activity in the communications rooms, comprehensive and professional 'Deep Cleaning' is mandatory.

Comprehensive cleaning and elimination of environmental contaminants are critical to the reliable operation of the ICT infrastructure that will be hosted in the communications rooms. It provides appropriate operational conditions for the ICT equipment, avoiding the risk of invalidating manufacturer's warranties. Failure to remove environmental contaminants generated during the construction activity has the potential to damage ICT equipment impacting availability of the Directorate's **critical** systems.

A communications room must be cleaned by a "technical cleaning" company specialising in cleaning of ICT communications rooms or Data Centres. A company that does not specialise in cleaning communications rooms or data centres is unacceptable.

This document outlines requirements and specifications for the 'Deep Cleaning' of the communications rooms.

## 2. Deep Clean Considerations

### 2.1. Description

Refurbishment or construction of a communications room or UPS room, results in contaminants and debris that has the potential to damage ICT equipment installed in these rooms. Proper cleaning of these rooms is imperative to availability of critical ICT services.

'Deep Cleaning' of communications rooms involves cleaning of the room from ceiling to the floor. It includes cleaning of the **all** horizontal and vertical surfaces, including ICT equipment, to remove dirt, dust and marks left during and after construction is completed. Details of 'Deep Cleaning' requirements are provided within this document.

### 2.2. Timeframe Requirements

2.2.1. The post-construction 'Deep Clean' must be completed as per the following:

1. Prior to room hand over; and
2. Before any active ICT equipment is to be installed or made operational.

2.2.2. A post-construction 'Deep Clean' will also be required after room hand over if any construction work or contaminant generating work has been done since the initial post-construction 'Deep Clean'.

2.2.3. If an additional post-construction 'Deep Clean' is required after active equipment has been installed, the cleaning company will be required to be escorted and supervised by a DSD or Shared Services ICT (SSICT) staff member.

Note: This service will be billed to the project if SSICT staff attend the site.

2.2.4. If any construction work or contaminant generating works have occurred whilst equipment is active, this work has the potential to damage or destroy the installed equipment. This will void all warranty on installed equipment. It is expected that any equipment that sustains damage or destruction from the construction work or contaminant generating works after the initial post-construction 'Deep Clean', will financially be the responsibility of the site builder or contractor to clean, repair or purchase a replacement for the equipment.

Note: Each network switch costs in excess of \$12,000.

#### 2.2.5. Recommendations

**Rec-1.** It is recommended, if already activated, that the smoke and/or early warning fire detection systems be disarmed during the cleaning process to prevent false alarms. In the event of an alarm due to activities in the communications room, **all** call out costs will be incurred by the head contractor.

**Rec-2.** It is recommended that all cleaning works should start from the ceiling space and then work down, reducing contaminants settling on already cleaned surfaces.

# 3. Deep Cleaning Requirements

## 3.1. Communications Room Floor

- 3.1.1. All debris must be removed from the communications room floor.
- 3.1.2. A broom must never be used on the communications room floor because it will result in settled contaminants becoming airborne.
- 3.1.3. The floor surface must be deep cleaned with a vacuum cleaner equipped with a High Efficiency Particulate Air (HEPA) filter.
- 3.1.4. Following vacuum cleaning, a **damp** mop with communications room approved cleaning chemicals must be used to remove any remaining contaminants and dissipate any static accumulation. The mop **must not be wet** as excessive moisture can damage floor trim and/or lamination. The mop must be used exclusively for the server room so that outside particles are not brought in, which can cross contaminate the floor.

### 3.1.5. Recommendation and Requirement

**Rec-3.** It is a requirement that ‘adhesive-coated contamination control mats’ are placed in high traffic areas and entryways significantly decreasing the amount of contamination brought into the communications room on footwear and equipment wheels.

**Rec-4.** It is a requirement that the head contractor’s representative removes the soiled ‘adhesive-coated contamination control mat’ sheets at regular intervals as they become ineffective when soiled.

**Rec-5.** No bucket of liquids is to be used in the communications room.

## 3.2. Equipment and Surfaces - General

The racks and servers are the first places that unfiltered air encounters, making them a candidate where small airborne particles can settle. The equipment and surfaces of the communications room must be deep cleaned to remove any contaminants that settled on any surfaces or equipment.

- 3.2.1. Equipment and surfaces must be cleaned using a HEPA filter equipped vacuum cleaner.
- 3.2.2. All equipment and surfaces must be wiped down using disposable damp wipes with communications room approved anti-static chemicals.

## 3.3. Data Cabinets

3.3.1. All data cabinets must be vacuumed using a HEPA filter equipped vacuum cleaner and then wiped down using disposable damp wipes with server room approved anti-static chemicals. This includes complete wipe down and thorough cleaning of the following:

1. All internal surfaces (including cables);
2. External surfaces;
3. Data cabinet doors including any lips of the doors where dust can build up;
4. Tops of data cabinets; and
5. Any support equipment within the communications room.



### 3.4. Patch Panels

3.4.1. All data and communication patch panels within data cabinets must be vacuumed using a HEPA filter equipped vacuum cleaner.

### 3.5. Structural Surfaces

3.5.1. All structural surfaces in the communications room must be vacuumed where possible using a HEPA filter equipped vacuum cleaner and then wiped down using disposable damp wipes with communications room approved anti-static chemicals. Although the list is not comprehensive the surfaces include:

1. Light fixtures;
2. Walls;
3. Windows;
4. Partitions;
5. Doors;
6. Skirting;
7. Duct work;
8. Overhead cable trays; and
9. Cables.

### 3.6. Ceiling

3.6.1. If a ceiling plenum exists, all ceiling tiles will need to be removed and cleaned with a vacuum cleaner equipped with a HEPA filter.

3.6.2. In addition to vacuuming, overhead raceways must be wiped down using a damp disposable cloth with communications room approved anti-static chemicals.

### 3.7. Subfloor

3.7.1. If a subfloor exists, all floor tiles must be removed and must be vacuumed with a HEPA filter equipped vacuum cleaner.

3.7.2. Accumulated residue must be removed from the subfloor using disposable damp wipes with communications room approved anti-static chemicals, carefully working around cabling.

3.7.3. Any cabling in the subfloor must be wiped down with server room approved anti-static chemicals.

3.7.4. The supporting grid work must be vacuumed with a HEPA filter equipped vacuum cleaner and wiped down with server room approved anti-static chemicals.

3.7.5. Any rubber gaskets in use should also be removed and wiped down.

#### 3.7.6. Recommendation

**Rec-6.** When cleaning the subfloor, it is recommended to do it in sections. There should be no more than 24 square feet of flooring open at any time to minimize airflow disruption to ICT equipment and to reduce settled contaminants becoming airborne.

### 3.8. Air conditioners

3.8.1. All A/C filters should be cleaned thoroughly if A/C has been running prior to 'deep cleaning' operation.

# 4. Compliance Requirements

The cleaning company must comply with the following requirements:

## 4.1. Certification, Standards and Checklist

- 4.1.1. The company must be certified and accredited to perform ICT communications room “deep clean”. A non-specialist cleaning company is **unacceptable**.
- 4.1.2. The company must comply with any applicable International Standards for communications room cleaning.
- 4.1.3. The staff employed to perform ICT communications room cleaning must be experienced and suitably qualified to perform the task.
- 4.1.4. A cleaning checklist must be developed by the company and provided to DSD Infrastructure Hub for review.
- 4.1.5. The final inspection will be conducted following completion of the deep clean while the cleaning representative is onsite. The completed checklist certifying that communications room has been deep cleaned must be provided to DSD/SSICT representative at the time of the inspection. In the event the completed checklist is not provided to DSD/SSICT, the communications room will not be accepted as completed and ready for handover.
- 4.1.6. **Recommendation.**

**Rec-7.** DSD must be notified at least 2-days prior to the final ‘Deep Clean’ as DSD representative must be present to conduct final inspection.

**Rec-8.** The builder **must** ensure that a completed checklist is available for review by the DSD representative.

## 4.2. Inclusion in the Project Plan

- 4.2.1. The head contractor must allow adequate time for ‘Deep Clean’. This milestone must be included in the head contractor master program schedule and provided to DSD.
- 4.2.2. The head contractor must review and adhere to DSD’s communications room inspection schedule.

# Appendix A : References and Amendment Log

## Glossary of terms

Term	Definition
ACT	Australian Capital Territory
ACTHD	ACT Health Directorate
CHS	Canberra Health Services
DSD	Digital Solutions Division
HEPA	High Efficiency Particulate Air
ICT	Information and Communication Technology
SSICT	Shared Services ICT

**Table 1 - Glossary of terms**

## Amendment history

Version	Summary of Changes	Author	Date
2019.0.1	Initial draft	Nitin Saxena	22/11/2019
2019.0.2	Minor feedback from peer review	Mark Moerman	25/11/2019
2020.0.1	Updates to include additional information	Nitin Saxena	26/03/2020
2020.0.2	Updates to include David Richards comments and review	Nitin Saxena	27/03/2020

**Table 2 - Amendment History**

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