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**Group REPORT**

Permissioned Distributed Ledger (PDL);

Study on Utilising PDL to Standardized IoT Service Layer Platform oneM2M

<

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# Executive summary

# Introduction

This document seeks to understand how Permissioned Distributed Ledger (PDL) can be employed in standardized oneM2M IoT service layer platforms through various use cases. The document also will explore various mechanisms to utilize PDL by interworking with the oneM2M standardized IoT platform.

# 1 Scope

The present document …

# 2 References

## 2.1 Normative references

Normative references are not applicable in the present document.

## 2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non‑specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] <Standard Organization acronym> <document number><version number/date of publication>: "<Title>".

[i.2] etc.

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## 3.1 Terms

For the purposes of the present document, the [following] terms [given in ... and the following] apply:

## 3.2 Symbols

For the purposes of the present document, the [following] symbols [given in ... and the following] apply:

## 3.3 Abbreviations

For the purposes of the present document, the [following] abbreviations [given in ... and the following] apply:

# 4 Overview of oneM2M

## 4.1 Introduction

## 4.2 oneM2M Overall Framework

## 4.3 oneM2M Applications

# 5 Integration of PDL with oneM2M

## 5.1 Need for PDL in IoT

## 5.2 Advantages of Using PDL in oneM2M

## 5.3 Challenges and Solutions

# 6 Architecture of PDL within oneM2M

## 6.1 PDL Structure and Components

## 6.2 Data Flow and Interaction

# 7 Implementation of PDL in oneM2M

## 7.1 Sample Use Cases

## 7.2 Security Considerations

## 7.3 Performance Evaluation

# 8 Future Outlook and Recommendations

## 8.1 Potential Improvements and Upgrades

## 8.2 Risks and Challenges in Future Implementation

# 9 Future Outlook and Recommendations

## 9.1 Potential Improvements and Upgrades

## 9.2 Risks and Challenges in Future Implementation

# 10 Conclusion

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Change history

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