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Context-Aware Identity Management Framework

Abstract

This report assesses how the emerging market for context-aware information can be applied to solve future identity management needs. It proposes a framework for context-aware identity management that builds upon existing and future authentication and authorization infrastructure to deliver a more robust set of solutions for network providers, enterprises, IT operations and consumer-based services. It also addresses the role of context-aware identity management in supporting the need of federated authentication and authorization processes when the context management functions reside in a different domain.

Foreword

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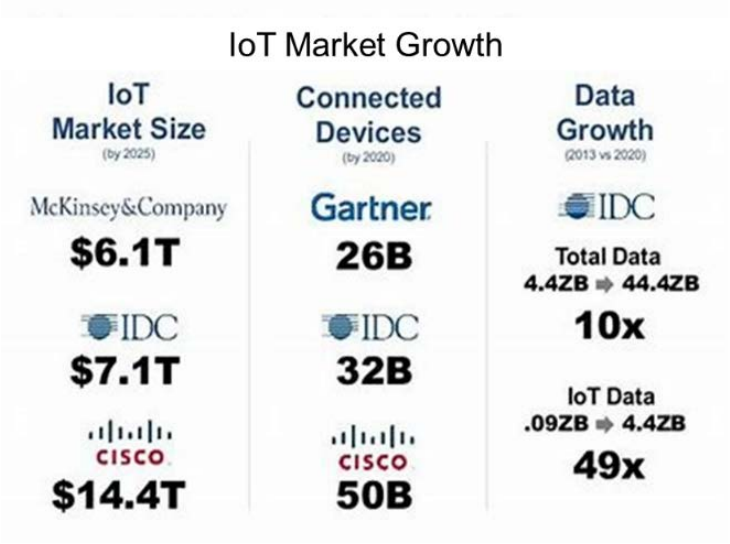
1. Introduction – The Future Context-aware Ecosystem

One of the most significant industry trends is the evolving marketplace for contextual data. Technology advancements in Internet of Things (IoT) sensors and devices, edge computing and storage, and a massive number of connected devices, are creating the abundance of contextual information available to networks. The growing need to effectively collect, manage and analyze this information is driving the development of new solutions that can effectively discover and apply context-based information to meet future market requirements.



The growth of IoT-based contextual data is creating new opportunities for context-enabled services and applications. It is the combination of IoT device growth and the expanding market for connected devices that is accelerating the availability of contextual information. This is further illustrated by the exponentially higher growth rate of IoT data with respect to data growth in general.

In most applications, context produces a higher intrinsic value for information versus raw data. Context-awareness infers that either the data, or the associated metadata, delivers some additional information about the environment surrounding the user, device or object. In this way, context-awareness will typically offer a greater level of reliability and usefulness surrounding the source and application of the data.