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ETSI Standard

Open Service Access (OSA); Application Programming Interface (API); Part 11: Account Management SCF (Parlay 6)



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Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 11 of a multi-part deliverable covering Open Service Access (OSA); Application Programming Interface (API), as identified below. The API specification (ES 204 915) is structured in the following parts:

- Part 1: "Overview";
- Part 2: "Common Data Definitions";
- Part 3: "Framework";
- Part 4: "Call Control";
- Part 5: "User Interaction SCF";
- Part 6: "Mobility SCF";
- Part 7: "Terminal Capabilities SCF";
- Part 8: "Data Session Control SCF";
- Part 9: "Generic Messaging SCF";
- Part 10: "Connectivity Manager SCF";
- Part 11: "Account Management SCF";**
- Part 12: "Charging SCF";
- Part 13: "Policy Management SCF";
- Part 14: "Presence and Availability Management SCF";
- Part 15: "Multi-Media Messaging SCF";
- Part 16: "Service Broker SCF".

The present document has been defined jointly between ETSI, The Parlay Group (<http://www.parlay.org>) and the 3GPP, in co-operation with a number of JAIN™ Community (<http://www.java.sun.com/products/jain>) member companies.

The present document forms part of the Parlay 6.0 set of specifications.

The present document is equivalent to 3GPP TS 29.198-11 V7.0.0 (Release 7).

1 Scope

The present document is part 11 of the Stage 3 specification for an Application Programming Interface (API) for Open Service Access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardised interface, i.e. the OSA APIs.

The present document specifies the Account Management Service Capability Feature (SCF) aspects of the interface. All aspects of the Account Management SCF are defined here, these being:

- Sequence Diagrams.
- Class Diagrams.
- Interface specification plus detailed method descriptions.
- State Transition diagrams.
- Data Definitions.
- IDL Description of the interfaces.
- WSDL Description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the Unified Modelling Language (UML).

2 References

The references listed in clause 2 of ES 204 915-1 contain provisions which, through reference in this text, constitute provisions of the present document.

ETSI ES 204 915-1: "Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview (Parlay 6)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 204 915-1 apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ES 204 915-1 apply.

4 Account Management SCF

The following clauses describe each aspect of the Account Management Service Capability Feature (SCF).

The order is as follows:

- The Sequence diagrams give the reader a practical idea of how each of the SCF is implemented.
- The Class relationships clause shows how each of the interfaces applicable to the SCF, relate to one another.
- The Interface specification clause describes in detail each of the interfaces shown within the Class diagram part.
- The State Transition Diagrams (STD) show the transition between states in the SCF. The states and transitions are well-defined; either methods specified in the Interface specification or events occurring in the underlying networks cause state transitions.
- The Data Definitions clause shows a detailed expansion of each of the data types associated with the methods within the classes. Note that some data types are used in other methods and classes and are therefore defined within the Common Data types part ES 204 915-2.

4.1 General requirements on support of methods

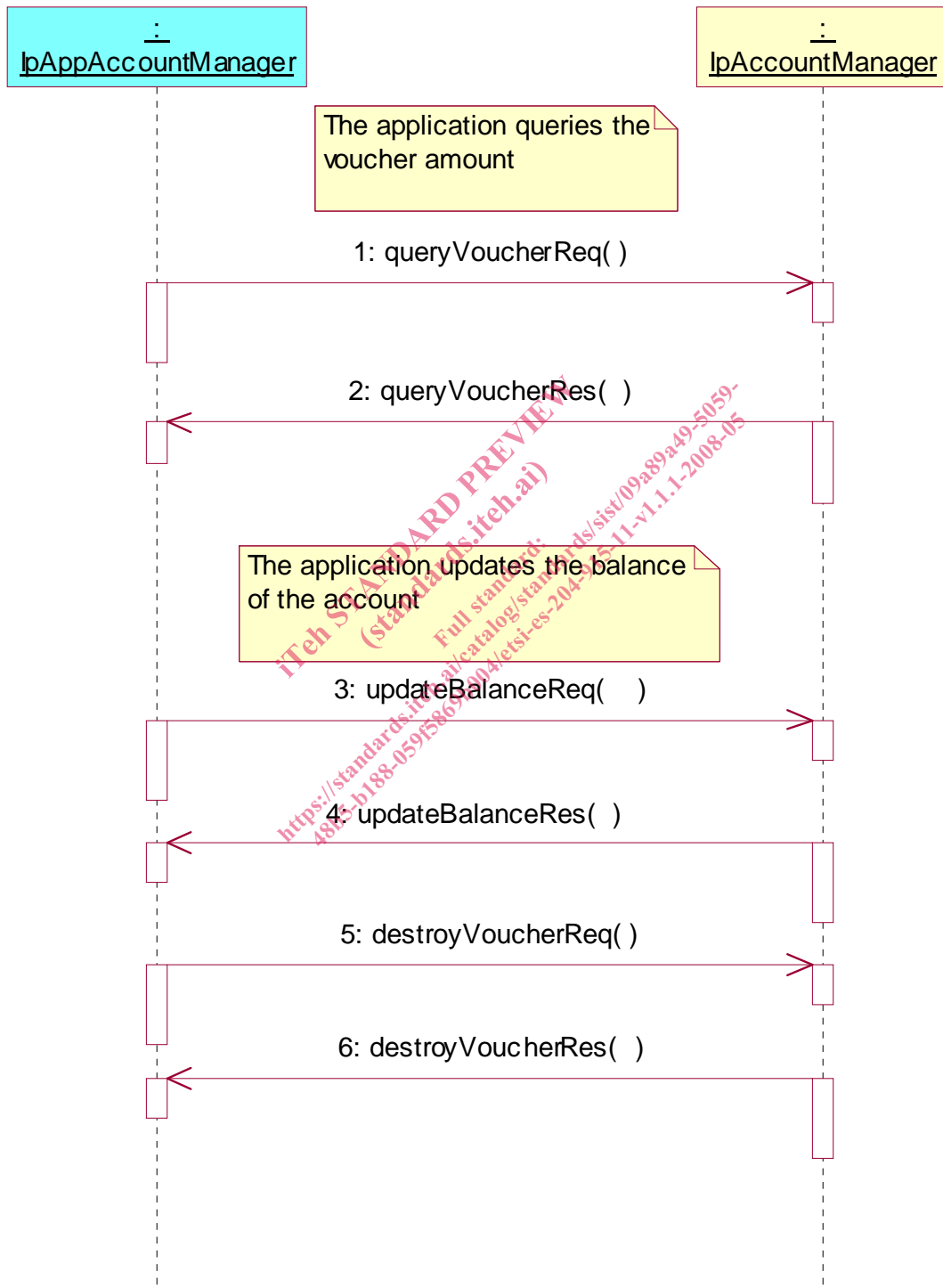
An implementation of this API which supports or implements a method described in the present document, shall support or implement the functionality described for that method, for at least one valid set of values for the parameters of that method.

Where a method is not supported by an implementation of a Service interface, the exception P_METHOD_NOT_SUPPORTED shall be returned to any call of that method.

Where a method is not supported by an implementation of an Application interface, a call to that method shall be possible, and no exception shall be returned.

5 Sequence Diagrams

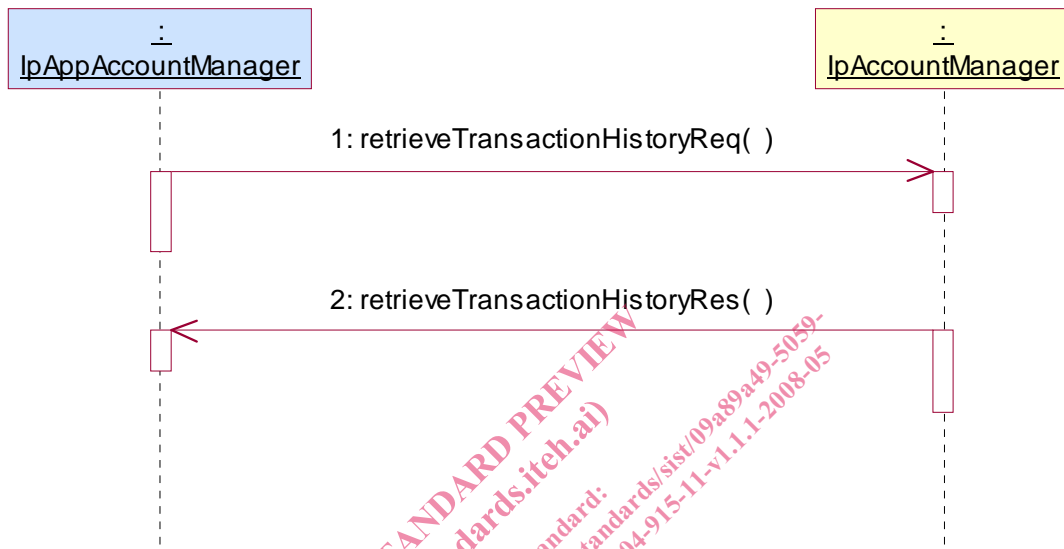
5.1 Standard Voucher Handling



- 1: This message is used to get a voucher for an amount.
- 2: This message used to return the amount requested.

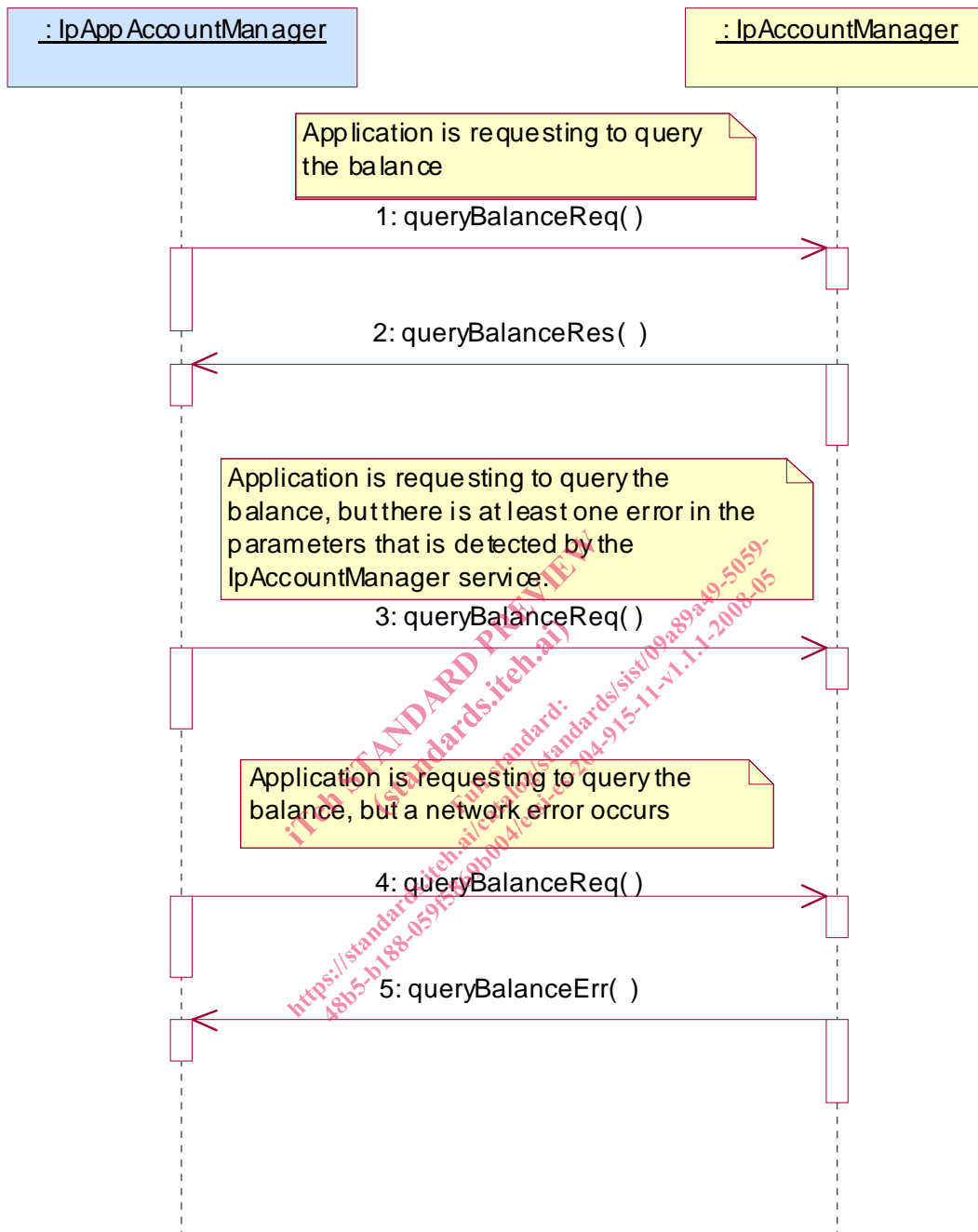
- 3: This message is used to update the balance of the account.
- 4: This message is used to return the confirmation of the update.
- 5: This message is used to remove the voucher.
- 6: This message is used to confirm that the voucher is removed.

5.2 Standard Transaction History Retrieval



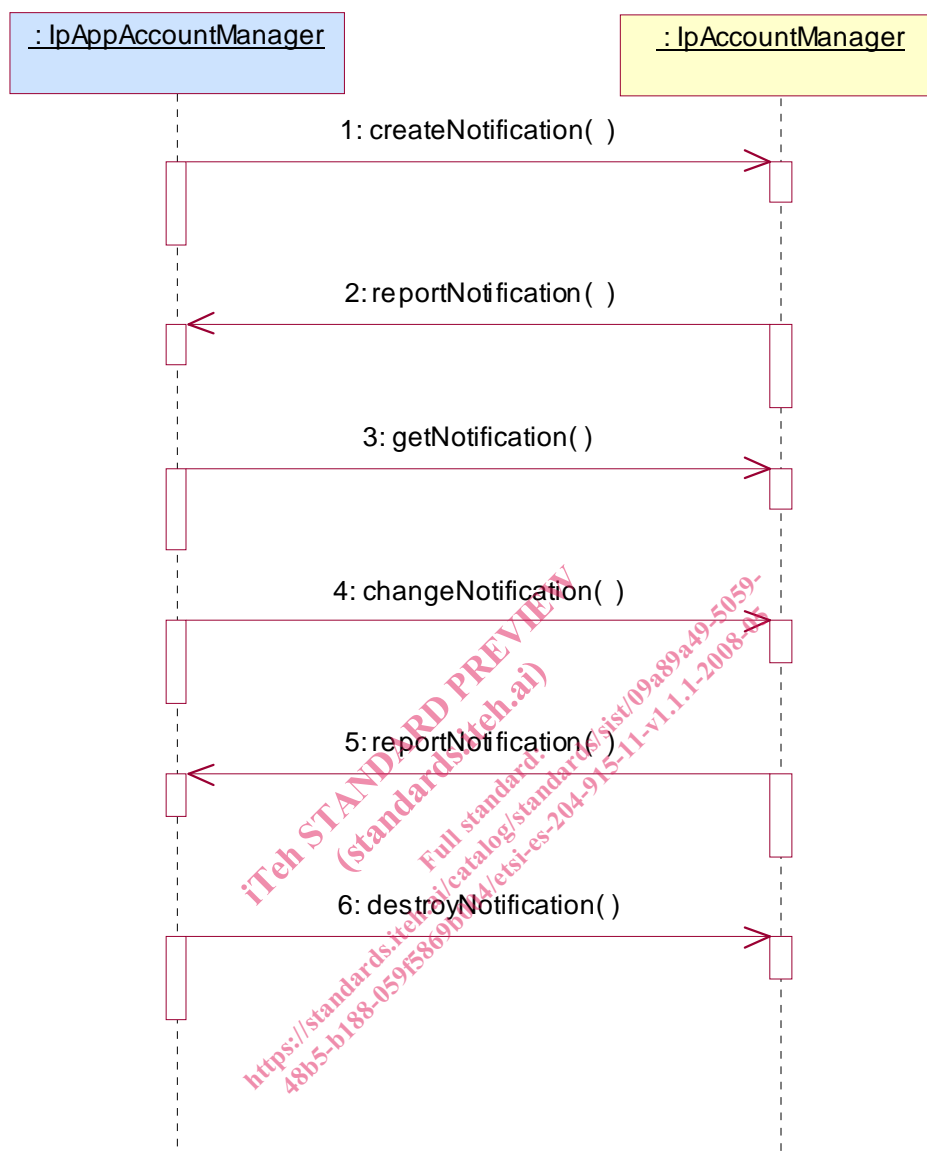
- 1: This message is used by the application to retrieve a transaction history for a certain subscriber's account.
- 2: This method passes the result of the transaction history retrieval request for a specific user to its callback object.

5.3 Standard Query Handling



- 1: This message is used to query the balance of the account of one or several users.
- 2: This message passes the result of the balance query for one or several users to its callback object.
- 3: This scenario shows the case where at least one error in the parameters of the message is detected by the `IpAccountManager` object. An exception will be thrown.
- 4: This scenario shows the case where a network error occurs.
- 5: This message passes the error of the balance query. No exception is thrown.

5.4 Standard Notification handling



- 1: This message is used by the application to request notifications from the IpAccountManager service on certain criteria for one or several users.
- 2: This message is used by the IpAccountManager service to report a charging event that meets the criteria set in the createNotification message.
- 3: The application can request the current criteria set in the IpAccountManager service by invoking the getNotification method.
- 4: This message is used by the application to change the criteria initially created by createNotification, and previously obtained by getNotification.
- 5: This message is used by the IpAccountManager service to report a charging event that meets the new criteria.
- 6: This method is used by the application to disable the charging notifications.