



Subscription Management System

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Introduction

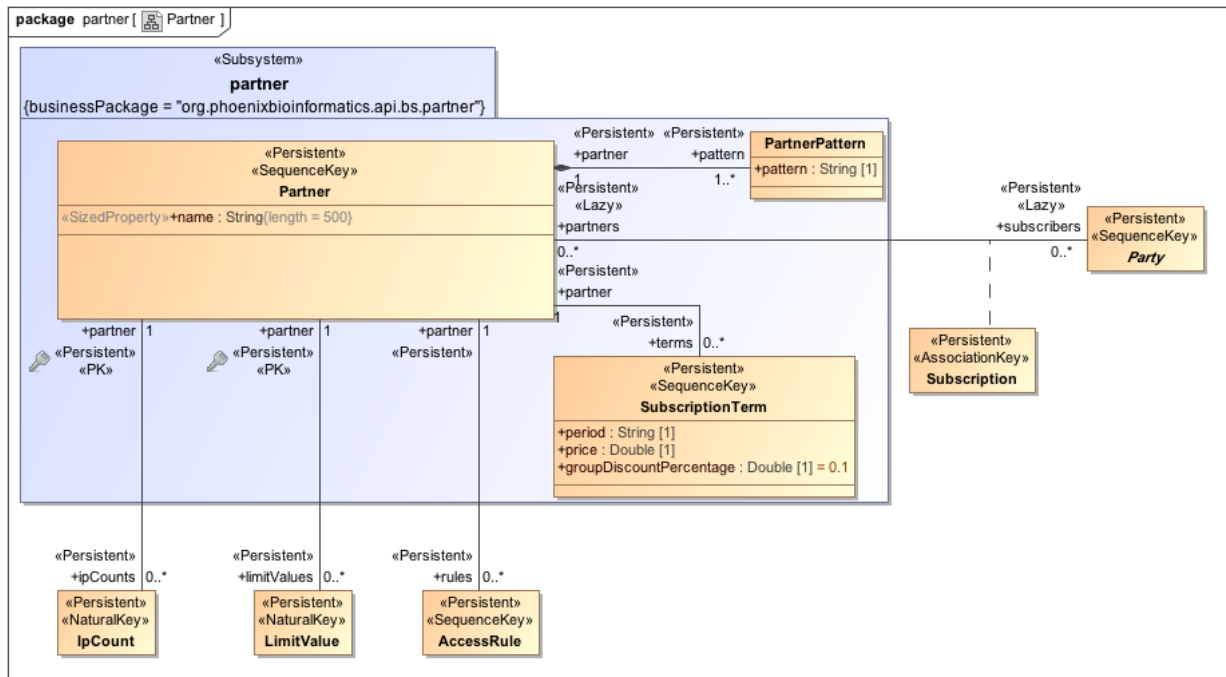
The Phoenix Subscription Management System Application Programming Interface (API) is a RESTful API designed to provide all the services required to support Phoenix subscriptions and partners. Phoenix partners with various entities to provide services paid for by subscription. The API is an interface to the Subscription Management System database documented here. See the API documentation for complete descriptions of the functionality of the API.

The Subscription Management System database contains several subsystems:

- **Partner:** the systems that comprise the Phoenix partnerships for subscription
- **Party:** the people and organizations and their relationships that participate in the system
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- **Meter:** the counts and limits that manage metered access to the partner systems
- **Subscription:** the subscription and payment details
- **Authentication:** the user information required to authenticate subscribed or registered users
- **Authorization:** the patterns and other information that support decisions to grant access to the partner content
- **Logging:** the operational logs containing page view and session details

Partner

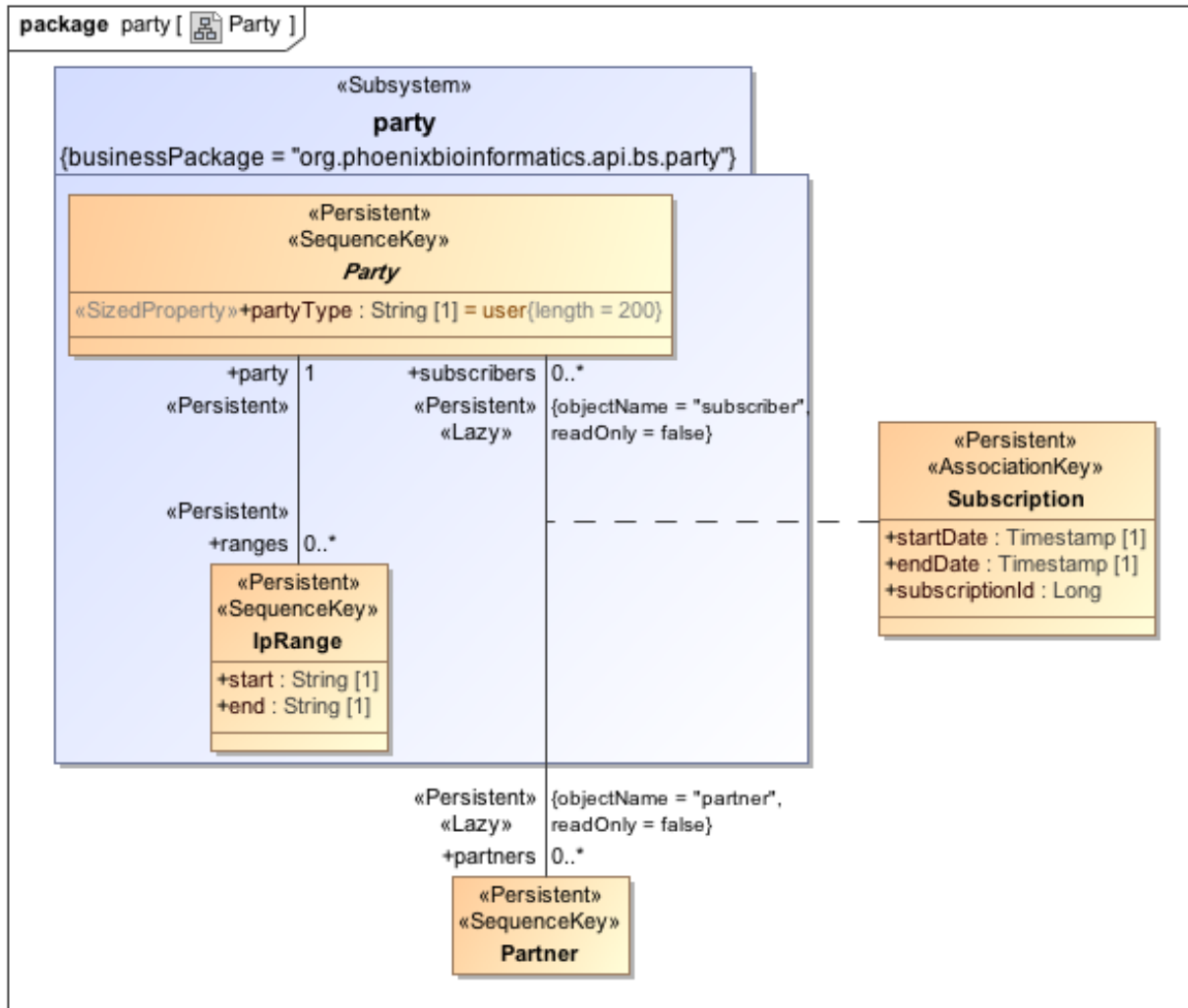
A partner is a system that comprises a unit for subscription, authentication, and authorization. The user accesses the partner system through a well-defined set of uniform resource identifiers (URIs) identified by a set of regular-expression patterns. Partners have individual subscription terms for display on subscription pages. Partners have subscriptions by parties; see the [Subscription](#) subsystem. Parties have IP counts and limit values; see the [Meter](#) subsystem. Partners also own access rules (combinations of URI patterns and access types); see the [Authorization](#) subsystem.



- **Partner:** a system comprising a unit for subscription, authentication, and authorization
 - *partnerId*: unique identifier for the partner (key)
 - *name*: the name of the partner
- **PartnerPattern:** A regular expression pattern that identifies a set of URIs for the partner system; the complete set of patterns for the partner defines the complete set of URIs for the partner system
 - *partnerId*: unique identifier for the partner (key)
 - *pattern*: the regular expression that matches a set of URIs for the partner site (key)
- **SubscriptionTerm:** A standardized period of time and price for subscriptions to a partner's system; used to provide the list of terms for subscribing for individuals
 - *subscriptionTermId*: unique identifier for the term (key)
 - *partnerId*: the partner to which the term applies
 - *period*: the period of time for which a subscription allows access to a partner
 - *price*: the price for a subscription for this term
 - *groupDiscountPercentage*: the discount for this term for a group subscription expressed as a decimal number with 2 significant digits past the decimal point

Party

A *party* is an abstract entity that is some kind of system participant. A subscription is a many-to-many association between parties and partners; see the [Subscription](#) subsystem.

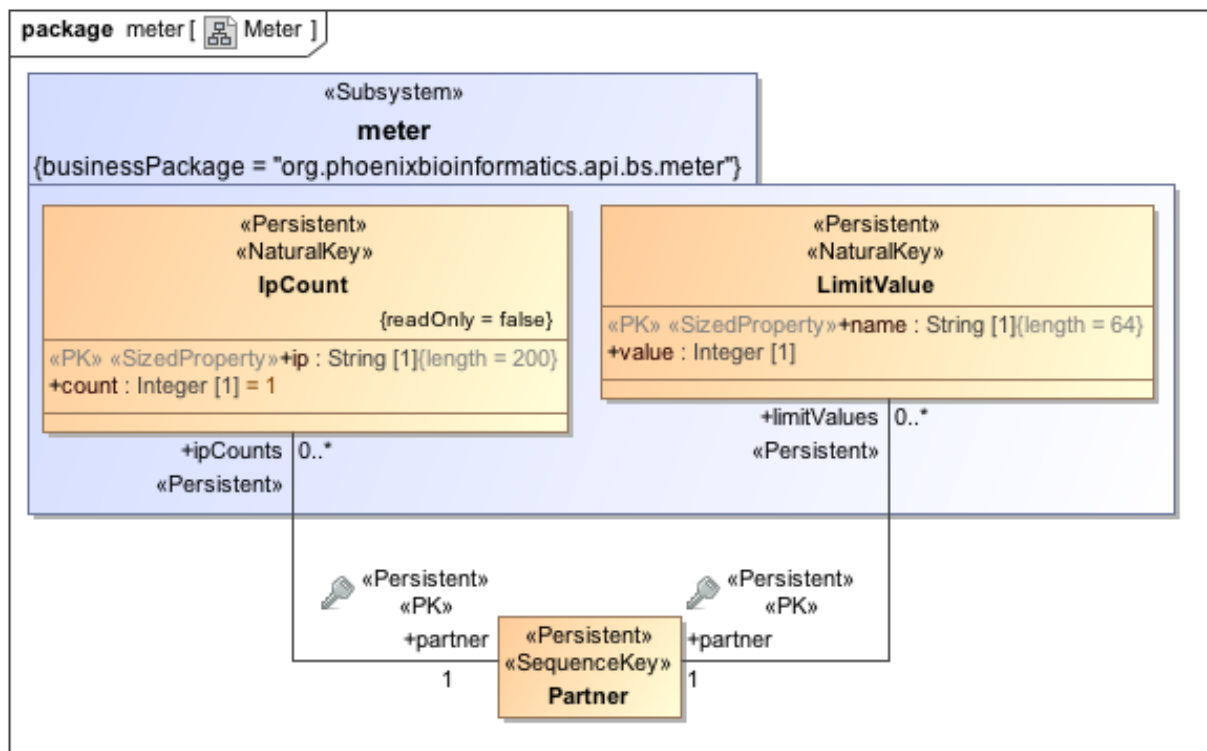


- **Party:** abstract entity that is some kind of system participant
 - *partyId*: unique identifier for the party (key)
 - *partyType*: "user"
- **IpRange:** A range of IP addresses for a subscription; ranges must not overlap for a subscription, they must be mutually exclusive
 - *ipRangeId*: unique identifier for the range (key)
 - *partyId*: unique identifier for party that owns the IP range (foreign key)
 - *start*: the IP address that is the first address in the range; must not be part of any other range for the subscription
 - *end*: the IP address that is the last address in the range; must be greater than the start and must be a "reasonable" end to the range (TBD)

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Meter

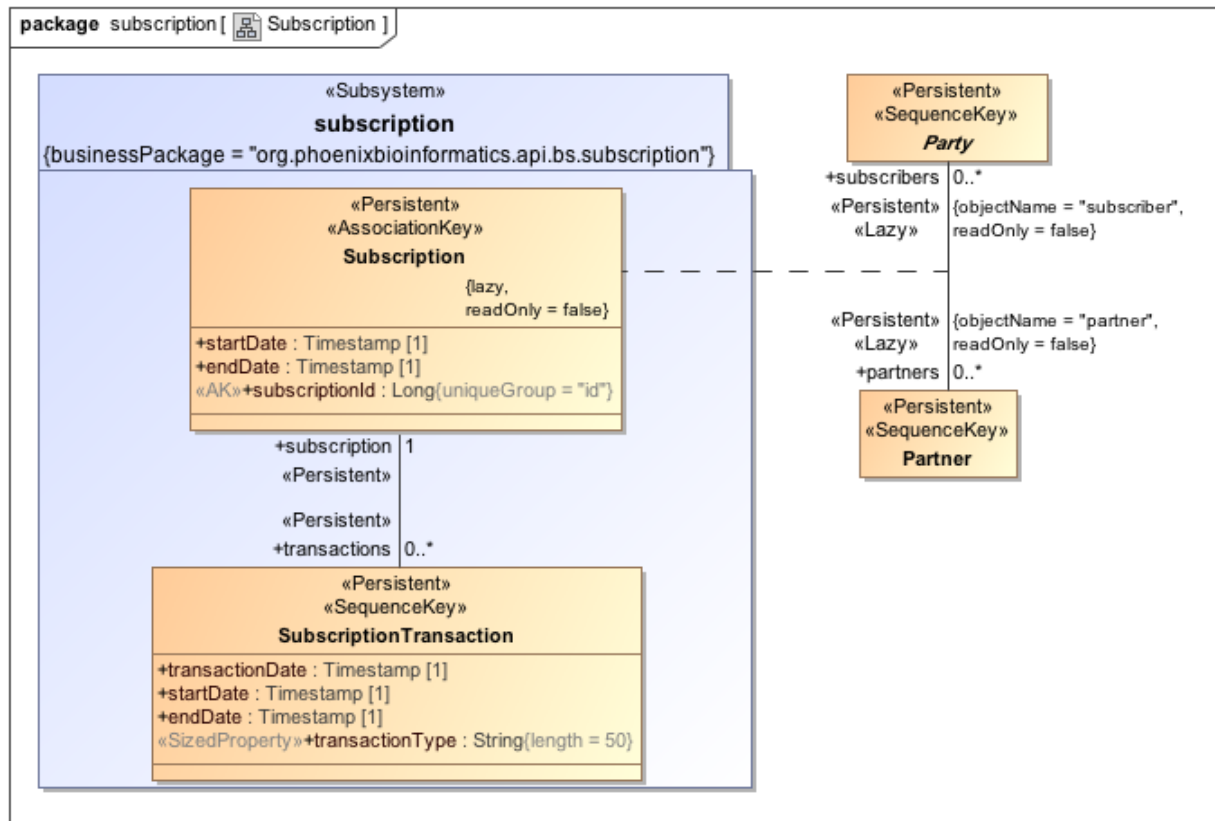
A *meter* is a count of page views. The meter subsystem comprises a set of partner-ip-address counts and a set of limits to enforce on those counts. The user accesses the system, which increments the counts and enforces the limits.



- **IpCount:** the number of accesses by a specific IP address to partner resources
 - *ip*: the IP address (key)
 - *count*: the number of accesses
- **LimitValue:** a named limit on the IP address count for a specific partner
 - *name*: the name of the limit (key)
 - *value*: the number of accesses at which the limit applies

Subscription

A *subscription* is an agreement by a party to take and pay for access to a partner system. A subscription has a set of transactions (initial subscription, renewal, refund).



- **Subscription:** An agreement by a party to take and pay for access to a partner system; a relationship between a party and a partner system
 - *subscriptionId*: the unique identifier for the subscription (key)
 - *partyId*: the unique identifier for the subscribing party
 - *partnerId*: the unique identifier for the subscribed partner system
 - *startDate*: the date and time at which the subscription commences
 - *endDate*: the date and time at which the subscription ends

- **SubscriptionTransaction:** A transaction (initial subscription, renewal, subscription refund) for a subscription; this class provides a history of the subscription
 - *subscriptionId*: the unique identifier for the subscription (key)
 - *transactionDate*: the date and time of the transaction
 - *startDate*: as of the transaction date, the date and time of the start of the subscription
 - *endDate*: as of the transaction date, the date and time of the end of the subscription
 - *transactionType*: the kind of transaction (Initial, Renewal, Refund)

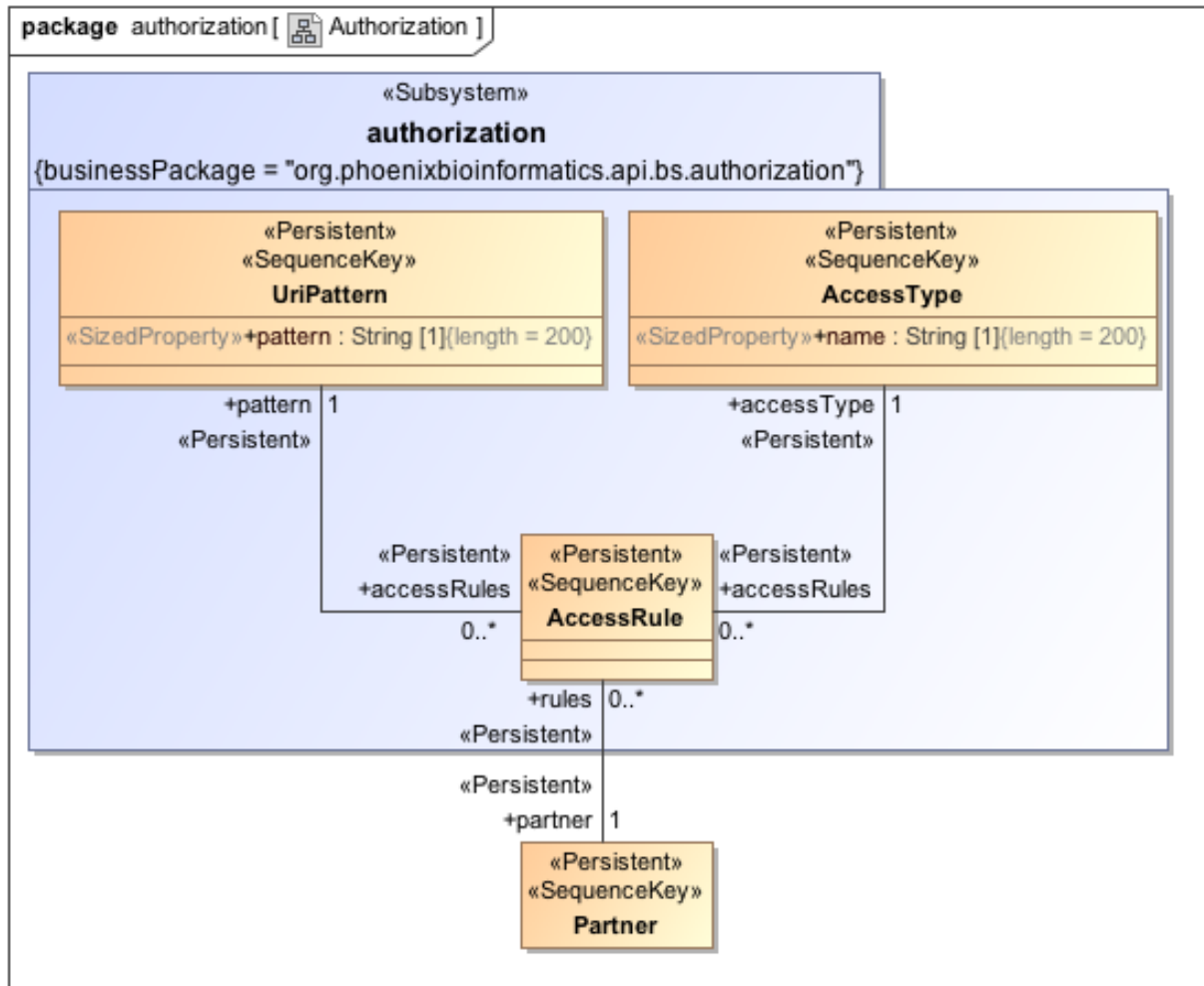
Authentication

Authentication is the process of verifying the identity of a user. The Subscription Management System uses a username-and-password authentication scheme.

This section is not yet designed.

Authorization

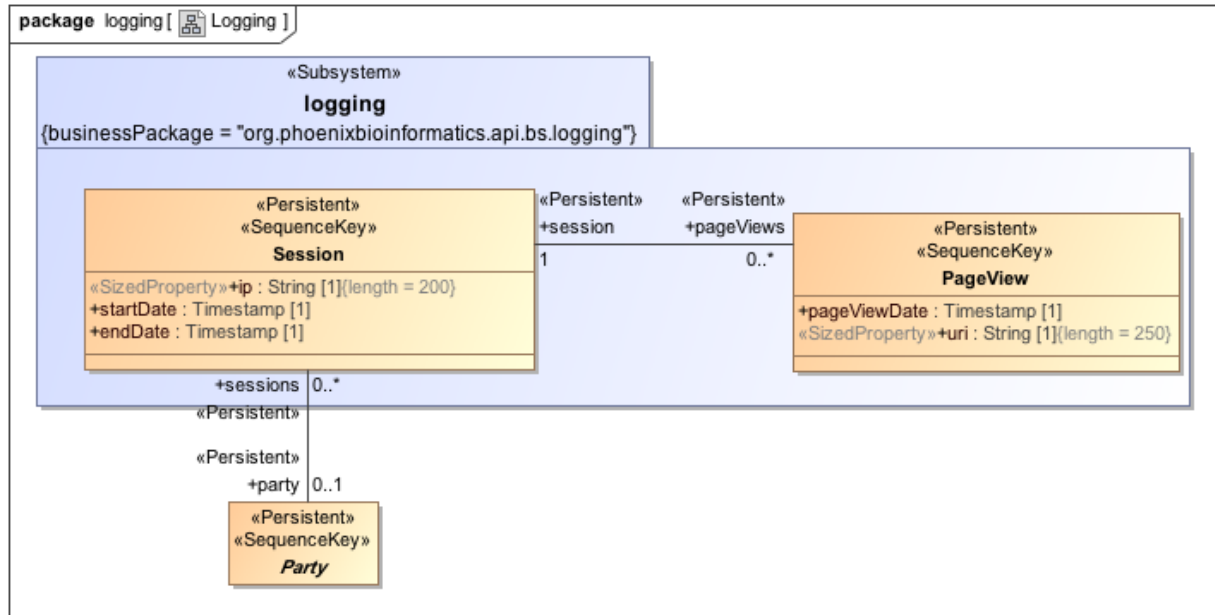
Authorization is the process of granting or refusing access to a partner. The Subscription Management System specifies partners as sets of URIs identified by regular expression patterns.



- **UriPattern**: A regular expression pattern that specifies a set of URIs
 - *patternId*: unique identifier for the pattern (key)
 - *pattern*: a regular expression that identifies a set of URIs
- **AccessType**: A particular kind of access to authorize
 - *accessTypeId*: unique identifier for the access type (key)
 - *name*: the name of the access type
- **AccessRule**: A rule that links a set of URIs to a specific access type
 - *accessRuleId*: unique identifier for the access type (key)
 - *patternId*: the set of URIs that trigger the rule
 - *accessTypeId*: the type of access to authorize for the set of URIs
 - *partnerId*: the partner that owns the rule

Logging

Logging is the process of persisting a description of some kind of activity starting at a specific date and time and ending at a specific date and time. The Subscription Management System currently logs page views and sessions. A page view is an access of a partner with a URI. A session is a set of possibly empty related page views. Note that a session is not partner-specific.



- **Session:** a collection of page views by the same ip address
 - *sessionId*: the unique identifier for the session (key)
 - *ip*: the IP address that made the requests in the session
 - *startDate*: the date and time at which the session began
 - *endDate*: the date and time at which the session ended
 - *partyId*: the party that initiated the session, if any
- **PageView:** a single access through a URI
 - *pageViewId*: the unique identifier for the page view (key)
 - *sessionId*: the id of the session containing the page view
 - *pageViewDate*: the date and time of the request
 - *uri*: the full URI of the request, including query string