

## Conformance - REST

Certain calendaring properties and components are interrelated and it is necessary to have knowledge of all these properties and their current values to allow consistent update and understanding of a target component. The normative definition for these relationships is RFC5445, RFC5446 and related RFCs.

As in those specifications this REST-ful protocol assumes a complete view of entities being fetched or updated. This is necessary to ensure that properties are not lost when round tripped through a service or client. To this end all parties in any RESTful transaction **MUST** preserve any data they do not understand. This allows the data model to be updated by the addition of properties, parameters and value types.

Services allowing updates to entities **MUST** ensure that the result after an update operation is still internally consistent.

### ***Start, end and duration in calendar components***

A period of time is fully specified by a start and an end or duration.

### **Updating, transporting and maintaining start, and and duration.**

- For all components the calculated or specified start must be at or before the end.
- When a system updates or stores a calendar component it **MUST** retain the relationship of start, end and duration. Applications **MUST NOT** without good cause, change a start and end pair into a start and duration nor the reverse. Semantically they are not equivalent when DST transitions occur during the time of the event.
- For interoperability, iCalendar based systems **SHOULD** avoid the use of weekly durations and XML based systems **SHOULD** avoid the use of yearly durations.

### **VEVENT:**

- The three properties are DTSTART, DTEND and DURATION.
- DTSTART **MUST** appear once and only one of DTEND or DURATION **MAY** be present.
- The DTSTART property for a VEVENT specifies the inclusive start of the event. For recurring events, it also specifies the very first instance in the recurrence set.
- The DTEND property for a VEVENT calendar component specifies the non-inclusive end of the event.
- For cases where a VEVENT calendar component specifies a DTSTART property with a DATE value type but no DTEND nor DURATION property, the event's duration is taken to be one day.
- For cases where a VEVENT calendar component specifies a DTSTART property with a DATE-TIME value type but no DTEND nor DURATION property, the event ends on the same calendar date and time of day specified by the DTSTART property, that is, it signifies a zero length instant in time.

## **VTODO:**

- The three properties are DTSTART, DUE, DURATION.
- DTSTART MAY appear once.
- Either DUE or DURATION MAY appear in a VTODO, but DUE and DURATION MUST NOT occur in the same VTODO.
- If DURATION does appear in a VTODO, then DTSTART MUST also appear in the same VTODO.
- The three properties for a VTODO are related in the same way as for VEVENT. Additionally a VTODO calendar component without the DTSTART and DUE (or DURATION) properties specifies a VTODO that will be associated with each successive calendar date, until it is completed.

## **VJOURNAL:**

- DTSTART only, which may be a date or date-time value.

## **VAVAILABILITY**

- DTSTART and DTEND if specified MUST be date-time values.
- DTSTART MAY appear once and signifies start of the busy period.
- Only one of DTEND or DURATION MAY appear and signify the end of the busy period.
- If DURATION does appear in a VAVAILABILITY, then DTSTART MUST also appear in the same VAVAILABILITY.

## **AVAILABILITY**

- DTSTART and DTEND if specified MUST be date-time values.
- DTSTART MUST appear once and signifies start of the free period.
- Only one of DTEND or DURATION MAY appear and signify the end of the free period.

## ***Recurrences.***

- The RECURRENCE-ID is a property of each instance of a recurring event. It is calculated from the DTSTART and the recurrence rules or added to the set by the RDATE property.
- RDATE, EXDATE and RECURRENCE-ID must take the same form as the DTSTART. That is if DTSTART is a DATE value then the RDATE and EXDATE must be DATE. If DTSTART is a date-time the RDATE and EXDATE values must take the same form, including the same timezone.
- Overrides to an instance are specified by completely specifying the instance with the appropriate RECURRENCE-ID property.
- An RDATE adds an instance to the recurrence set.

- An EXDATE deletes an instance by specifying the recurrence id(s) to be deleted. Applications SHOULD NOT specify overrides for instances so deleted.
- The recurrence set is calculated from the RRULE and RDATES and then applying any EXDATE properties. That is EXDATE takes precedence over RDATE and the RRULE.

### ***Alarms:***

- Alarms are typically anchored to the start or end of an event or task. This is defined by the RELATED parameter to the TRIGGER property.

### ***Unrecognized or unsupported elements***

- A system SHOULD reject any attempt to store components which it does not support. A SYSTEM MUST respond with a CalWS:unsupported-calendar-component if such an attempt is made.
- A system MUST ignore any elements it does not understand.