

Source: Andreas Becker on BACnet-L (19-Jan-2016)

Question: *one of our customers wants to setup a BACnetDateRange from 1.November to 30.April. _Every Year_*

In my reading of the BACnet Spec, this is not allowed:

(quoting the BACnet standard) Chapter 12:

...Date_List property ... Both startDate and endDate may be an unspecified date or a specific date only.

Is there an other solution??

Answer: David Fisher

There is a long and complex history behind DateRanges in Schedules. The short version is that the original 1995 language in the standard was not sufficiently clear about how DateRanges were intended to work, due to a lack of consensus about the wording. Regrettably this caused several incompatible implementations to exist in the marketplace. When the SSPC attempted to readdress this issue in the 2004 standard, the compromise was to make the restriction of “all wildcard” or “no wildcard” as the only options for DateRange. This is too bad because there are many DateRange wild combinations that are useful.

The original idea (which was not articulated thoroughly in the standard) was that in DateRanges where there are any wildcards, each of the four ranges needs to be treated in a strict order of precedence: year, month, day-of-month, day-of-week. The test for something being “within the date range” is that it passes four tests in this order:

1. Is today's year within the range of years?
and
2. Is today's month within the range of months?
and
3. Is today's day-of-month within the range of days?
and
4. Is today's day-of-week within the range of days of week?

So for example:

startdate year=ANY, month=ANY, day=ANY, dayofweek=Monday
enddate year=ANY, month=April, day=ANY, dayofweek=ANY

To match this range a date must perform these steps:

- since start and end year=ANY it always matches year
- since start and end month is ANY through April this is the same as having said “January through April”
- since start and end day=ANY it always matches day
- since start and end dayofweek is Monday through ANY this is the same as having said “Monday through Sunday”

So the <<intended>> logic of the example boils down to “is the month between January and April inclusive”?

The key idea, which a lot of people didn’t get because the standard was not clear enough, was that the evaluation of range is different when there are any “ANYs” in the 8 fields of the range.

This is a moot point now, but that’s how we intended for it to work.