Some parts of DSpace use a custom date/time parser (org.dspace.util.MultiFormatDateParser) which is driven by a table of regular expressions, so it can match any of a variety of formats. The table is found in config/spring/api/discovery-solr.xml. To test new and altered rules, you can use the DSpace command line tool's validate-date command. You can simply pass it a date/time string on the command line (dspace validate-date 01-01-2015). You can pipe a stream of strings to be validated, one per line (dspace validate-date < test.data). Or you can have it prompt you for each string to be tested (dspace validate-date).