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# Importing Lease Data into Forms Online

## A Developer's Guide

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Blue Moon Forms Online includes an interface for importing lease data from your Web-enabled property management software, allowing you to edit lease data within the Forms Online interface, save the record in the Lease Database, and print any of the official forms available in Forms Online. The interface also offers you the flexibility to “bypass” the Forms Online editor altogether and generate a printable PDF directly.

This document describes how to format your data for import as well as the mechanism for transferring it into Forms Online.

### XML and the Blue Moon DTD

In order to import data into Forms Online, you must first encapsulate it in XML (eXtensible Markup Language) format. XML is a data format for structured document interchange on the Web. It is a standard defined by The World Wide Web consortium (W3C). Information about XML and related technologies can be found at [www.w3.org/XML](http://www.w3.org/XML).

The XML data you pass must adhere to the appropriate Blue Moon DTD (Document Type Definition), which can be found [on our Web site in the Developers section](#) (*please refer to the DTD designated for the state in which you are using your Blue Moon product*). The Blue Moon DTD specifies attributes for maximum field length as well as the expected format for data elements. If your data does not adhere to the specification set out in the DTD, the import process will terminate and display an error message.

Please note that you will be passing a subset of the entire data set defined in the Blue Moon DTD when importing into Forms Online.

### Login Data

The first component of the information you pass to Forms Online is the Login data. In order to establish a secure connection to Blue Moon Forms Online, you must pass your Serial Number, User ID, and password.

**Login data takes the following format:**

---

```
<LOGIN>
  <SERIAL-NUMBER>MySerial</SERIAL-NUMBER>
  <USER-ID>MyUserID</USER-ID>
  <PASSWORD>MyPassword</PASSWORD>
</LOGIN>
```

Note that the login data elements are encapsulated by <LOGIN> tags. You must substitute your login data for each of the login elements. Failure to include ALL of the above fields will result in termination of the import process.

### Note:

Please be advised that publishing your Login information in HTML form may constitute a security risk, as it could be used by unauthorized persons to access your Forms Online account. Blue Moon recommends that you dynamically insert your Login data into the string value you will be passing to the Online Rental Application AFTER the user has submitted the form.

## Lease Data

Lease data refers to the information that will populate the lease record you are importing into Forms Online. Lease data is encapsulated by the parent element set `<LEASE>` (see *Sample XML Data Set* later in this document) and is broken down into two groups: `<COMMON>` fields and `<OTHER>` fields.

Unlike Login data, you can choose which combination of Lease data elements you want to pass to Forms Online. One exception to this rule is that you must include the `<UNIT-NUMBER>` (corresponds to “unit number” for apartments; “property code” for condo and residential properties). Failure to include the Unit will result in termination of the import process.

In most cases, you will only pass a small subset of Lease data values. These include the unit, residents, beginning lease date, etc. Because these fields contain data which is unique to each lease, they are not populated by the Default Lease. These fields are grouped under the `<COMMON>` element subset as shown in the examples below.

### Example 1: Invalid Lease data set (no Unit)

---

```
<COMMON>
  <RESIDENT-1>John Doe</RESIDENT-1>
  <LEASE-BEGIN-DATE>01/01/2003</LEASE-BEGIN-DATE>
  <LEASE-END-DATE>12/31/2004</LEASE-END-DATE>
  .
  .
</COMMON>
```

### Example 2: Valid Lease data set

---

```
<COMMON>
  <UNIT-NUMBER>100XML</UNIT-NUMBER>
  <RESIDENT-1>Bob Smith</RESIDENT-1>
  <LEASE-BEGIN-DATE>01/01/2003</LEASE-BEGIN-DATE>
  <LEASE-END-DATE>12/31/2004</LEASE-END-DATE>
  .
  .
</COMMON>
```

### Passing XML Lease Data to Forms Online

There are many ways to exchange XML data on the Web. The Online Rental Application accepts XML data via a secure HTTP POST-method form submission. Blue Moon provides links to simple form templates for sending data to the Online Rental Application at [www.bluemoon.com/developers](http://www.bluemoon.com/developers).

#### Note the following requirements:

---

- For properties using the TAA or NAA lease, the form POST action must be:  
[https://www.bluemoon.com/products/forms\\_online/import\\_xml.php](https://www.bluemoon.com/products/forms_online/import_xml.php)  
For GAA properties:  
[https://www.bluemoon.com/products/forms\\_online/import\\_xml.php?ver=GAA](https://www.bluemoon.com/products/forms_online/import_xml.php?ver=GAA)  
For AANC:  
[https://www.bluemoon.com/products/forms\\_online/import\\_xml.php?ver=AANC](https://www.bluemoon.com/products/forms_online/import_xml.php?ver=AANC)
- The field containing your XML data must be named **IMPORTXML** (this name is *CASE-SENSITIVE*)
- You may not include a custom DTD in your XML string. The Blue Moon DTD will be transparently pre-pended to your XML string and used to validate your data.
- You must “escape” quotes as necessary within your data to prevent premature termination of the **IMPORTXML** field’s value statement.
- You must pass all necessary login data elements as well as the unit number/property code of the record you wish to import.
- The Blue Moon DTD defines data types for many fields. Field elements whose type is not explicitly defined in the DTD are implied to expect “generic” string character data. The various data types contained in the Blue Moon DTD are:

Data Type	Description	Valid Examples
boolean	Expects TRUE/FALSE value (used with field elements corresponding to non-exclusive checkboxes)	TRUE FALSE true False T f

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<b>enum</b>	Integer value (corresponds to position of selected item in a group of mutually-exclusive checkboxes)	<b>Unit comes:</b> <input type="checkbox"/> Unfurnished <input type="checkbox"/> Furnished  <b>1</b> (first item selected) <b>2</b> (second item selected)
<b>currency</b>	Dollar value	<b>500.00</b> <b>500</b> (cents omitted)
<b>date</b>	Full date	<b>01/05/2002</b> <b>1/5/02</b> (leading zeros omitted) <b>1-5-02</b> (dashes as separator)
<b>email</b>	E-mail address	<b>johnq@mail.com</b>
<b>integer</b>	Numeric value (no decimals)	(Any integer value)
<b>multichoice</b>	Letter selected from multiple-choice form item (range of valid responses limited by <b>range</b> attribute)	<b>range = 2: a or b</b> <b>range = 3: a, b, or c</b> <b>range = 4: a, b, c, or d</b>
<b>percent</b>	Numeric value up to 100 (no decimals)	(Any integer value between 1 and 100)
<b>phone</b>	Phone number	<b>(512) 322-0460</b> <b>(512)322-0460</b> <b>512-322-0460</b> <b>5123220460</b>
<b>zip</b>	Zip code	<b>78701</b> <b>78701-4125</b> (Zip+4 code)

If the format of any of your lease data values is inconsistent with the data types defined in the Blue Moon DTD, the import process will be terminated.

### The Property Number

Most Forms Online licenses are configured with only one property (or site). However, in a few special instances, some licenses may contain multiple properties.

Because each property is assigned its own lease database, distinct from any other properties which may be assigned to the same account, it becomes necessary when passing lease data to multi-property licenses to specify explicitly the unique ID, or "Property number," of the target property.

The Property Number can be supplied by means of the `<PROPERTY-NUMBER>` element, which is encapsulated by the `<COMMON>` element subset.

#### Note:

If the target license contains a single property, as most do, you do NOT need to provide a Property Number in such cases. This is because the target property is implicitly assumed to take the first and only Property Number on file for the license.

If you choose NOT to include the Property Number in your data AND the license corresponding to the provided Serial Number contains more than one property, the system will display an intermediate screen prompting the user to select the target property from a pull-down menu (this is not the case when you are requesting a PDF document directly – see end of section labeled *Generating a Printable PDF Directly* for more info). Once a selection has been made, the user is then redirected to the Blue Moon Lease Editor.

If you wish to bypass this property selection feature and provide a seamless transition to the Blue Moon interface, you must pass the Property Number of the target property, as shown in the following example.

#### Example: Specifying the Property Number

---

```
<COMMON>
  <PROPERTY-NUMBER>XXXX</PROPERTY-NUMBER>
  .
  .
</COMMON>
```

Please note that passing an invalid value for `<PROPERTY-NUMBER>` will result in termination of the import process.

### About Default Lease Data

Most of the items that appear on the printed Lease Contract can be pre-filled with values from the Forms Online Default Lease. This feature eliminates the need to pass values that do not often change from one Lease Contract to the next. You can, however, override values from the

Default Lease with custom values of your own by explicitly passing values for those field elements.

### Example 1: Overriding Default Lease info

---

```
<OTHER>
  <RELETTING-CHARGE>250.00</RELETTING-CHARGE>
  <RETURNED-CHECK-CHARGE>25.00</RETURNED-CHECK-CHARGE>
  <NUMBER-OF-APARTMENT-KEYS>3</NUMBER-OF-APARTMENT-KEYS>
</OTHER>
```

In certain instances, you may wish for a specific field to be left blank, even though the Default Lease contains a value for that field. This can be accomplished by passing an “empty tag” for the field element in question, which can take the form `<FIELD-NAME></FIELD-NAME>` or `<FIELD-NAME />`.

### Example 2: Overriding Default Lease info with empty values

---

```
<OTHER>
  <RELETTING-CHARGE />
  <RETURNED-CHECK-CHARGE />
  <NUMBER-OF-APARTMENT-KEYS />
</OTHER>
```

For a complete listing of fields contained by the `<COMMON>` and `<OTHER>` element subsets, refer to the Blue Moon DTD.

## Generating a Printable PDF Directly

As mentioned earlier in this document, it is possible to “bypass” the Forms Online editor altogether and generate a printable PDF directly. This can be accomplished by including the IDs of the forms you wish to print encapsulated in `<PRINT>` element tags. The record will be saved to your Forms Online database, and your forms counter will be reduced by the total number of clicks assessed for the forms to be printed.

A list of available forms along with their respective IDs and print charges can be found at [www.bluemoon.com/developers/matrix\\_forms.php](http://www.bluemoon.com/developers/matrix_forms.php).

The following example shows how to bypass the Forms Online editor by including form IDs.

### Example: Passing IDs of forms to print

---

```
<LEASE>
  <PRINT>APMLEASE</PRINT>
  <PRINT>LEADHAZD</PRINT>
  <PRINT>PETAGREE</PRINT>
  <COMMON>
    <UNIT-NUMBER>100XML</UNIT-NUMBER>
    .
  </COMMON>
</LEASE>
```

Please be advised that you must also include the Property Number of the target property if you are requesting the PDF document from a license containing more than one property. *If no Property Number is provided, then it will be implicitly defined as the first property listed in the Forms Online system for the specified license.*

## Putting It All Together

Now that you understand the function and syntax of each data subset, let's construct an example combining all of the XML subsets.

### Example: Sample XML Data Set

---

```
<BLUEMOON>
  <LOGIN>
    <SERIAL-NUMBER>MySerial</SERIAL-NUMBER>
    <USER-ID>MyUserID</USER-ID>
    <PASSWORD>MyPassword</PASSWORD>
  </LOGIN>
  <LEASE>
    <COMMON>
      <UNIT-NUMBER>100XML</UNIT-NUMBER>
      <RESIDENT-1>Bob Smith</RESIDENT-1>
      <LEASE-BEGIN-DATE>01/01/2003</LEASE-BEGIN-DATE>
      <LEASE-END-DATE>12/31/2004</LEASE-END-DATE>
    </COMMON>
    <OTHER>
      <RELETTING-CHARGE>250.00</RELETTING-CHARGE>
      <RETURNED-CHECK-CHARGE>25.00</RETURNED-CHECK-CHARGE>
      <NUMBER-OF-APARTMENT-KEYS>3</NUMBER-OF-APARTMENT-KEYS>
    </OTHER>
  </LEASE>
</BLUEMOON>
```

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An example demonstrating how to transmit XML data to Forms Online via an HTTP form submission can be viewed on the Blue Moon Web site at [www.bluemoon.com/developers/import\\_lease\\_sample.php](http://www.bluemoon.com/developers/import_lease_sample.php).