

Blue Moon Software presents

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Using the Online Rental Application

A Developer's Guide

Edited by Michael Phillipson

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Blue Moon Forms for Windows® and Blue Moon Forms Online® provide an interface for accepting rental applications via the Internet. A prospective resident visiting your Web site can fill out an official TAA/NAA or GAA rental application online and submit it to you for your review.

This document describes how to format rental application data for import as well as the mechanism for transferring it to the Blue Moon Online Rental Application. It also explains how to access imported rental applications using Blue Moon's Forms Software products.

XML and the Blue Moon DTD

In order to import data into the Online Rental Application, 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.

The XML data you pass to the Online Rental Application 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 Online Rental Application will terminate the import process 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 the Online Rental Application.

Forms for Windows vs. Forms Online

Blue Moon Software offers two product types: [Forms for Windows®](#) and [Forms Online®](#). As their names suggest, these products are designed for use on the Microsoft Windows operating system and on the Web respectively. The steps you will follow to import rental application data will vary depending on which Blue Moon product your property uses to manage leases.

The following instructions are broken down by each XML data subset that can be passed to the Online Rental Application.

Login Data

(If you are using Forms for Windows, please skip this section)

If your property uses Forms Online to manage leases, you must pass your Forms Online Serial Number to the Online Rental Application in the `<LOGIN>` section of your XML.

Login data takes the following format:

```
<LOGIN>
  <SERIAL-NUMBER>MySerial</SERIAL-NUMBER>
</LOGIN>
```

Note that the Serial Number is encapsulated by `<LOGIN>` tags. You must substitute your own Serial Number for the placeholder value shown above.

The Serial Number is only required if you are using Forms Online to manage your leases (see *Rental Application Settings* below). In that case, failure to include the Serial Number will result in termination of the import process.

Setting the Target Property

(If you are using Forms for Windows, please skip this section)

If you use Forms Online to manage leases AND you have multiple properties, you can pass a specific property number to the Online Rental Application. The `<PROPERTY-NUMBER>` element is used to specify the appropriate property.

Lease data takes the following format:

```
<LEASE>
  <COMMON>
    <PROPERTY-NUMBER>MyPropertyNo</PROPERTY-NUMBER>
  </COMMON>
</LEASE>
```

Note that `<PROPERTY-NUMBER>` is encapsulated by the parent element set `<LEASE>` and the data subset `<COMMON>` in the Blue Moon DTD. For more information, please refer to the relevant requirement description found in the *Passing XML Data to the Online Rental Application* section later in this document.

Rental Application Settings

The `<SETTINGS>` data subset is encapsulated by the parent element set `<RENTALAPP>` in the Blue Moon DTD. The values you pass in the `<SETTINGS>` section affect how the Online Rental Application is displayed and how it is processed upon submission.

The following is a breakdown of the elements that can be passed in the `<SETTINGS>` section along with the role of each:

Element	Description	Possible Values	Required Windows?	Required Web?
<code><BYPASS></code>	Instructs application engine to bypass step-by-step graphical interface and submit data directly with no end-user interaction	Boolean (refer to definition later in this document)	N	N
<code><TO-NAME></code>	Name of property processing Rental Application	Any	N	N/A
<code><TO-ASSOCIATION></code>	Abbrev. of apartment association	TAA, GAA or NAA (default)	N	N/A
<code><TO-CITY></code>	Property city	Any	N	N/A
<code><TO-STATE></code>	Property state	Two-letter US state abbrev.	N	N/A
<code><TO-EMAIL></code>	E-mail address to which rental application data will be sent upon submission	Any valid e-mail address	Y	Y

<CREDIT-CARDS-ACCEPTED>	Comma-delimited list of credit card types accepted for payment of application fee (if left blank, credit card fields will not be included on rental application)	e.g., MC, Visa, Discover, AmEx	N	N
<RECEIPT-CONFIRM-NAME>	Text of link displayed on submission confirmation page	Any text message	N	N
<RECEIPT-CONFIRM-URL>	Address of Web page linked on submission confirmation page	Valid HTTP URI	N	N
<RECEIPT-REDIRECT-URL>	Address of Web page to which user will be redirected upon application submission (overrides default confirmation page)	Valid HTTP URI	N	N

Please note that you are not required to pass values for most of the data elements defined above. However, these options can be used to maximize the functionality of the Online Rental Application.

Example: Passing Rental Application Settings

```

<SETTINGS>
  <TO-NAME>My Property</TO-NAME>
  <TO-ASSOCIATION>TAA</TO-ASSOCIATION>
  <TO-CITY>Houston</TO-CITY>
  <TO-STATE>TX</TO-STATE>
  <TO-EMAIL>contact@propertyname.com</TO-EMAIL>
  <CREDIT-CARDS-ACCEPTED>MasterCard,Visa</CREDIT-CARDS-ACCEPTED>
  <RECEIPT-CONFIRM-NAME>Property Home Page</RECEIPT-CONFIRM-NAME>
  <RECEIPT-CONFIRM-URL>
    http://www.yourdomain.com/confirmation.html
  </RECEIPT-CONFIRM-URL>
</SETTINGS>

```

Applicant Data

Also encapsulated by the `<RENTALAPP>` parent element set in the Blue Moon DTD is the `<APPLICANT>` data subset. The values you pass in the `<APPLICANT>` section can be used to pre-fill all of the applicant fields on the printed rental application.

In addition, you can include custom data that you want to appear in sections of the printed rental application that are designated for completion by the property manager. This information will not be displayed on the Online Rental Application and can be accessed and modified in the Blue Moon Forms software after the application has been submitted.

While none of the data elements in this subset are required (*unless you are bypassing the Blue Moon graphical interface as described later in this document*), you may choose to pass values for as many of these fields as you like. This can be useful if you want to allow information entered by a prospective resident on the property's Web site to carry over into the Online Rental Application.

Example: Passing Applicant Data

```
<APPLICANT>
  <APPLICANT-FIRST-NAME>John</APPLICANT-FIRST-NAME>
  <APPLICANT-MIDDLE-NAME>Richard</APPLICANT-MIDDLE-NAME>
  <APPLICANT-LAST-NAME>Smith</APPLICANT-LAST-NAME>
</APPLICANT>
```

Other Applicant Data

The last data subset encapsulated by the `<RENTALAPP>` parent element set in the Blue Moon DTD is `<OTHER>`. The values you pass in the `<OTHER>` section can be used to pre-fill fields which appear on the Online Rental Application but are not included in the printed form.

Such fields include information to assist the property in placing the applicant in a unit matching his/her search criteria.

You are not required to pass any of the fields in this group (*unless you are bypassing the Blue Moon graphical interface as described later in this document*).

Example: Passing Other Applicant Data

```
<OTHER>
  <COMMENT>I really want to live in this community!</COMMENT>
</OTHER>
```

Passing XML Data to the Online Rental Application

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.

Note the following requirements:

- For properties using the TAA or NAA lease, the form POST action must be:
<https://www.bluemoon.com/rentalapp/index.php>
 For GAA properties:
<https://www.bluemoon.com/rentalapp/index.php?ver=GAA>
 For AANC:
<https://www.bluemoon.com/rentalapp/index.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 a value for **<TO-EMAIL>** so that property can be notified upon submission of application
- 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
currency	Dollar value	500.00 500 (cents omitted)

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<code>date</code>	Full date	01/05/2002 1/5/02 (leading zeros omitted) 1-5-02 (dashes as separator)
<code>email</code>	E-mail address	johnq@mail.com
<code>phone</code>	Phone number	(512) 322-0460 (512)322-0460 512-322-0460 5123220460
<code>sex</code>	Expects MALE/FEMALE value (used with some field elements corresponding to mutually-exclusive checkboxes)	MALE FEMALE male Female M f
<code>yesno</code>	Expects YES/NO value (used with some field elements corresponding to mutually-exclusive checkboxes)	YES NO yes No Y n
<code>zip</code>	Zip code	78701 78701-4125 (Zip+4 code)

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

- If you wish to include a section on the application for obtaining credit card information, you must pass values for `<CREDIT-CARDS-ACCEPTED>` as well as `<NONREFUNDABLE-APPLICATION-FEE>` (for TAA/NAA states) or `<CREDIT-APPLICATION-FEE>` (GAA only).

Please note: Blue Moon Software does not process credit card payment transactions. This feature is merely provided as a convenient, secure method for accepting credit information online.

- Some fields located on the second page of the rental application can only be completed if the application is being submitted to a "Residential" or "Condominium/Townhome"

type property. The property type associated with the application is determined by the Forms Online property database that is assigned to the application.

Most Forms Online accounts contain only one property. However, some accounts have multiple properties, such as "Residential," "Condo," etc. Each property in Forms Online is assigned a unique "property number." By supplying the property number to the Online Rental Application by means of the `<PROPERTY-NUMBER>` element, which is encapsulated by the `<LEASE>` element subset, Forms Online is able to determine the property type.

If the `<PROPERTY-NUMBER>` element is not passed to the Online Rental Application, the property type of the first property in your Forms Online account is assigned to the rental application. Please note: if your Forms Online account contains a single property, you need never pass a value for `<PROPERTY-NUMBER>`, as the property type is automatically obtained from your first and only property.

If you do wish to assign a specific property type to the application, you must pass its corresponding property number. Passing an invalid property number to the Online Rental Application will result in termination of the import process.

Setting Custom Field Requirements

In order to reduce or eliminate the number of partially completed applications they receive, some properties may want to exert control over the minimum information that each applicant must provide in order to submit the application successfully. This can now be accomplished by inserting a "flag" attribute in the element tag of each field you wish to require, as shown in the following example.

Example: Specifying Required Fields

```
<APPLICANT>
  <APPLICANT-BIRTH-DATE required='yes' />
  <CURRENT-ADDRESS required='yes' />
  <CURRENT-CITY required='yes' />
  <CURRENT-ST required='yes' />
  <CURRENT-ZIP required='yes' />
</APPLICANT>
```

Based on the above snippet, the applicant would not be able to complete the application without entering his date of birth and current address information.

Any field which appears in the Online Rental Application interface can be flagged as "required."

About Default Lease Data

Some of the items found on the printed rental application which are designated for completion by the property manager can be pre-filled with values from the Forms Online Default Lease. This feature eliminates the need to pass values to the Online Rental Application 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

```
<LEASE>
  <COMMON>
    .
  </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>
```

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

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

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

Bypassing the Blue Moon Graphical Interface

While Blue Moon Software recommends that you use the standard graphical interface for collecting applicant data provided by the Online Rental Application, the Blue Moon application interface is flexible enough to allow property management companies who wish to host their own Web-based form interfaces to bypass the step-by-step graphical application interface altogether and submit the data directly for immediate processing.

In order to circumvent the standard form, the `<BYPASS>` tag must be included with a value of `True` in the data transmitted to the application interface (if a value of `False` is passed, the tag will be ignored).

Developers should also note that the following elements **MUST** be passed if `<BYPASS>` is included: `<APPLICANT-FIRST-NAME>`, `<APPLICANT-LAST-NAME>`, `<ACKNOWLEDGED-BY>`, `<AGREEMENT-ACCEPTED>`, `<RENTAL-SELECTION-CRITERIA-ACKNOWLEDGED>`, `<REQ-EMAIL>`, and `<REQ-PHONE>`.

The example that follows shows where these required fields are located in the data hierarchy.

Example: Passing elements required to bypass graphical interface

```
<RENTALAPP>
  <SETTINGS>
    <BYPASS>True</BYPASS>
    .
  </SETTINGS>
  <APPLICANT>
    .
    <APPLICANT-FIRST-NAME>John</APPLICANT-FIRST-NAME>
    <APPLICANT-LAST-NAME>Smith</APPLICANT-LAST-NAME>
    <ACKNOWLEDGED-BY>John Smith</ACKNOWLEDGED-BY>
    .
  </APPLICANT>
  <OTHER>
    <AGREEMENT-ACCEPTED>True</AGREEMENT-ACCEPTED>
    <RENTAL-SELECTION-CRITERIA-ACKNOWLEDGED>True</RENTAL-SELECTION-CRITERIA-ACKNOWLEDGED>
    <REQ-EMAIL>john_smith@mail.com</REQ-EMAIL>
    <REQ-PHONE>(512) 555-5555</REQ-PHONE>
    .
  </OTHER>
</RENTALAPP>
```

If the required data elements are not passed correctly, an error is returned.

Upon successful transmission of the application data, the browser is redirected to a confirmation page, as determined by the values passed for `<RECEIPT-CONFIRM-NAME>`, `<RECEIPT-CONFIRM-URL>`, and `<RECEIPT-REDIRECT-URL>` (see explanation of these elements earlier in this document).

Generating a Printable PDF Directly

(This feature applies to Forms Online users only. If you are using Forms for Windows, please skip this section)

Properties who host their own Web-based form interfaces for collecting applicant data may wish to allow their own on-site employees to generate a printable application form in one step, without having to log into the Forms Online interface manually. This assumes that the properties in question store applicant data internally for retrieval after the time of submission.

To this end, the Blue Moon application interface allows the property to transmit the stored applicant data in the prescribed XML format and receive a printable PDF document in return.

This can be accomplished by including the ID of the application form (TAA/NAA = `RENTWEB`; GAA = `APPLWEB`) encapsulated in `<PRINT>` element tags. The application data will be saved to the Forms Online database, and that property's forms counter will be reduced by the appropriate number of clicks assessed for the form to be printed.

Please note that following elements **MUST** be passed when requesting a PDF directly: `<APPLICANT-FIRST-NAME>`, `<APPLICANT-LAST-NAME>`, `<ACKNOWLEDGED-BY>`, `<AGREEMENT-ACCEPTED>`, and `<RENTAL-SELECTION-CRITERIA-ACKNOWLEDGED>`.

In addition, you must pass a valid User ID and password along with the Serial Number in the `<LOGIN>` section of your XML. This information is required to generate forms in Forms Online.

The example that follows shows how to generate a printable PDF directly by including the application form ID. Note that a Serial Number, User ID, and password are also included.

Example: Passing ID of form to print

```
<LOGIN>
  <SERIAL-NUMBER>MySerial</SERIAL-NUMBER>
  <USER-ID>MyUserID</USER-ID>
  <PASSWORD>MyPassword</PASSWORD>
</LOGIN>
<RENTALAPP>
  <PRINT>RENTWEB</PRINT>
  <SETTINGS>
    .
    .
  </SETTINGS>
  <APPLICANT>
    .
    .
    <APPLICANT-FIRST-NAME>John</APPLICANT-FIRST-NAME>
    <APPLICANT-LAST-NAME>Smith</APPLICANT-LAST-NAME>
    <ACKNOWLEDGED-BY>John Smith</ACKNOWLEDGED-BY>
    .
    .
  </APPLICANT>
  <OTHER>
    <AGREEMENT-ACCEPTED>True</AGREEMENT-ACCEPTED>
    <RENTAL-SELECTION-CRITERIA-ACKNOWLEDGED>True</RENTAL-
    SELECTION-CRITERIA-ACKNOWLEDGED>
    .
    .
  </OTHER>
</RENTALAPP>
```

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>
  </LOGIN>
  <RENTALAPP>
    <SETTINGS>
      <TO-NAME>My Property</TO-NAME>
      <TO-EMAIL>contact@propertyname.com</TO-EMAIL>
      <CREDIT-CARDS-ACCEPTED>MC,Visa</CREDIT-CARDS-ACCEPTED>
      <RECEIPT-CONFIRM-URL>
        http://www.yourdomain.com/confirmation.html
      </RECEIPT-CONFIRM-URL>
    </SETTINGS>
    <APPLICANT>
      <APPLICANT-FIRST-NAME>John</APPLICANT-FIRST-NAME>
      <APPLICANT-LAST-NAME>Smith</APPLICANT-LAST-NAME>
      <APPLICANT-BIRTH-DATE required='yes' />
    </APPLICANT>
    <OTHER>
      <COMMENT>I really want to live in this community!</COMMENT>
    </OTHER>
  </RENTALAPP>
</BLUEMOON>
```

For additional resources, including a user-friendly tool for generating the code needed to link to the Online Rental Application, please visit the Blue Moon Software Web site and click on the 'Developers' link, or go directly to: www.bluemoon.com/developers

Processing Rental Applications

After the user has submitted the Online Rental Application, that data can be accessed from your Blue Moon Forms Software product.

The following instructions are broken down according to the product type your property uses to manage leases:

Forms for Windows Users

1. Check your e-mail for a message with an encrypted file attachment. The body of the e-mail message will contain the applicant's name, the type of apartment he or she is interested in, and the price range, as well as any comments or special notes the applicant may wish to convey. All other information will be contained in the encrypted attachment and can only be read with Blue Moon Forms for Windows.
2. Save the attachment to your local drive so you can open it in the Blue Moon Forms Software.
3. Launch Blue Moon Forms for Windows.
4. Click on the "File" pull-down menu, and select "Import Internet Rental Application." The first time you use this feature, the program will look for the application file in your data folder; however, the file will more than likely be in your e-mail attachments folder. You will have to locate that file on your computer when prompted to "Open" the file. The file's name will be the applicant's name with a .app extension (e.g., *John Doe.app*). The next time you open an online rental application, Forms for Windows will automatically look for it in your e-mail attachments folder.
5. The Rental Application form will appear on your screen with the applicant's information filled in. Your property's default information will be on the second page of the form.
6. Review the information, fill out or change relevant information, and print out the application.

Note:

Blue Moon shall assume no liability of any kind to Licensee or to any other party which arises as a result of a breach of secured data files, the hacking into of such data files or for any other security failure and subsequent harm to Licensee or any third party.

Forms Online Users

1. Login to Forms Online at www.bluemoon.com/products/forms_online/login.php
2. After you login successfully, you will be alerted if you have received any new rental applications since your last visit, at which point, you can elect to view a list of your rental applications immediately. If you do not receive an alert, you can view a list of your applications by clicking on the "Application Forms" tab and selecting "Online Rental Applications" from the context menu.
3. The Online Rental Applications screen will display all the rental application records currently stored in your database. By default, these records are sorted by the date they were submitted, so the most recent applications will appear first. If you like, you can also sort them by "Applicant Name."
4. Click "View" next to the record you want to open in the Online Rental Application editor. (You can remove old records by clicking "Delete.")
5. After clicking "View," the application record you selected will open in the Online Application editor. You can browse the various sections of the application form by clicking the links in the left margin of the editor screen.

Please note: You will not be able to change the contents of fields submitted by the applicant. This information can only be accessed by the applicant at the time of application submission. In addition, some fields may not be editable depending upon the application lease type (see next step).

6. Many of the fields that appear in the sections you will complete have been populated by data from your Default Lease at the time of application submission – unless they were explicitly overridden by data contained in XML field elements during the application initialization process. You are free to change these values before printing.
7. Review the information, fill out or change relevant information, and print out the application.