What are the rules for email address syntax?

For an email to be delivered, it must have a valid address that follows certain rules of syntax.

A valid email address has four parts:
- Recipient name
- @ symbol
- Domain name
- Top-level domain

Recipient name
The recipient name represents an email mailbox that belongs to:
- A specific person
- A mailing list
- A department
- A role within a company (such as sales or customer service)

The recipient name may be a maximum of 64 characters long and consist of:
- Uppercase and lowercase letters in English (A-Z, a-z)
- Digits from 0 to 9
- Special characters such as ! # $ % & * + - / = ? _ ` { | }

A special character cannot appear as the first or last character in an email address or appear consecutively two or more times. The most commonly used special characters are the period (.), underscore(_), hyphen (-) and plus sign (+).

- Alternative special characters such as " ( ) , ; < > @ [ \ ]

These alternative special characters may be used with certain restrictions but are generally avoided since they may be prohibited by a sending or receiving server.

Because an organization or mailbox provider may restrict the use of special characters even though they are technically valid, it is best to minimize the use of special characters in recipient names.

Although recipient names are technically case sensitive, most mailbox providers and organizations accept upper and lower case letters to indicate the same user (for example, JOHNDOE@domainsample.com is the same as johndoe@domainsample.com).

Domain name
The domain name is a string of letters and digits that defines a space on the Internet owned and controlled by a specific mailbox provider or organization.

Domain names may be a maximum of 253 characters and consist of:
- Uppercase and lowercase letters in English (A-Z, a-z)
- Digits from 0 to 9
- A hyphen (-)
- A period (.) (used to identify a sub-domain; for example, email.domainsample)
**Top-level domain**
Top-level domains are the highest level of the domain name system for the Internet and is placed after the domain name in an email address.

Common top-level domains are:
- .com
- .net
- .org

**Examples**
Examples of valid email addresses include:

- johndoe@domainsample.com
- john.doe@domainsample.net
- john.doe43@domainsample.co.uk

Examples of invalid email addresses include:

<table>
<thead>
<tr>
<th>Email address</th>
<th>What makes it invalid</th>
</tr>
</thead>
<tbody>
<tr>
<td>@domainsample.com</td>
<td>The recipient name is missing.</td>
</tr>
<tr>
<td>johndoedomainsample.com</td>
<td>The @ symbol is missing between johndoe and domainsample.com.</td>
</tr>
<tr>
<td><a href="mailto:john.doe@.net">john.doe@.net</a></td>
<td>The domain name (domainsample) is missing after the @ symbol and before the top level domain (.net).</td>
</tr>
<tr>
<td>john.doe43@domainsample</td>
<td>The top level domain (.co.uk) is missing.</td>
</tr>
</tbody>
</table>