



UltraDNS² Quick Start Guide

Customer Guide
(March 2023)

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UltraDNS² Guide

UltraDNS² combines the award-winning UltraDNS resolution network with a second global DNS anycast network, operated by a leading anycast cloud provider. UltraDNS² provides the redundancy of having a separate network with all the advanced features and functionality of UltraDNS, giving you a single pane of glass to manage both your networks.

Now that you have enrolled in UltraDNS2, please familiarize yourself with the items in this guide to ensure that you correctly configure and maintain your new UltraDNS2 feature.

Account Configuration

When the UltraDNS² service is enabled for your account, the zone data within your account will begin to flow to both UltraDNS and UltraDNS² networks. Additionally, when UltraDNS² is officially turned on at the account level within the database, all the zone information is then copied over to both the UltraDNS and UltraDNS² networks, thereby Enabling your account.

Once this process has been established, you will need to configure your NameServer details.

Update Your NameServer Records with your Registrar

You will need to delegate the UltraDNS² specific Nameservers outside of UltraDNS to your registrar. The list of Name Server (NS) Records for both UltraDNS² and UltraDNS can be found in the *Domains* section of this guide.

Portal Changes

We have intentionally made the visual changes to the UltraDNS Managed Services Portal as minimal as possible, therefore, the following are the changes you may notice when logging into your account.

Logo / Branding Change

Although a rather minor change, the UltraDNS branding logo will be the first indicator that your account has been configured to utilize the UltraDNS² service. Every screen across the portal will display the new UltraDNS² logo, as shown below.



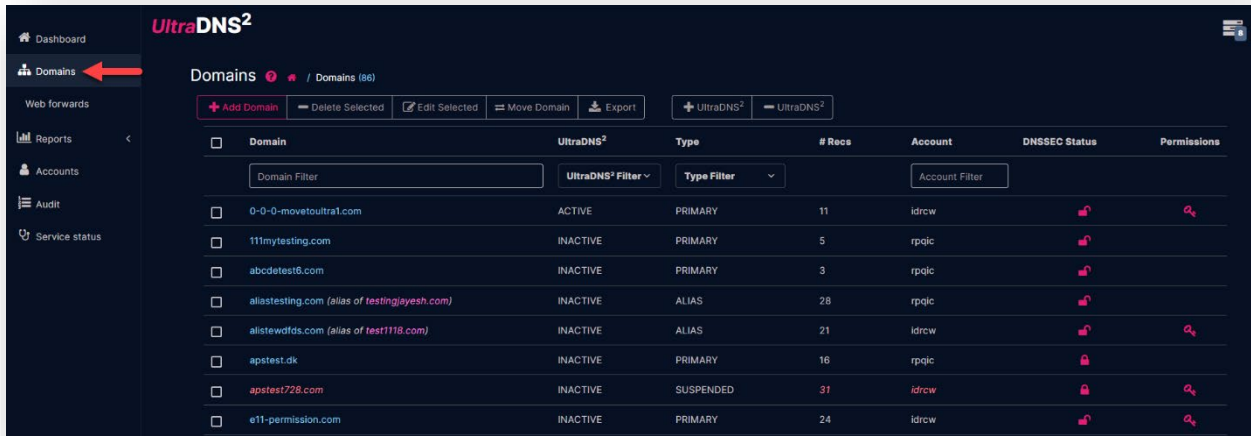
Figure 1 UltraDNS2 - Logo Change

Domains

For accounts that have UltraDNS² enabled (turned on and configured), the Domains page will provide an additional column, **UltraDNS2**, which provides a quick view drop-down menu to identify if a zone is **Active**, or **Inactive**.

- **Active** – When an account has the UltraDNS² feature enabled and the zone has the necessary Nameservers configured for UltraDNS², the zone is considered Active.
- **Inactive** – When an account has the UltraDNS² feature enabled, but the specific zone does not have the necessary UltraDNS2 nameservers configured to utilize the second network.

Using the drop-down menu, you can quickly switch between views to see which zones are **Active**, and which zones are Inactive and still require additional configurations.



Domain	UltraDNS ²	Type	# Recs	Account	DNSSEC Status	Permissions
0-0-0-movetoultra1.com	ACTIVE	PRIMARY	11	idrcw		
111mytesting.com	INACTIVE	PRIMARY	5	rpqjc		
abcdetest6.com	INACTIVE	PRIMARY	3	rpqjc		
aliastesting.com (alias of testingjayesh.com)	INACTIVE	ALIAS	28	rpqjc		
alistewdfds.com (alias of test1118.com)	INACTIVE	ALIAS	21	idrcw		
apstest.dk	INACTIVE	PRIMARY	16	rpqjc		
apstest728.com	INACTIVE	SUSPENDED	31	idrcw		
e11-permission.com	INACTIVE	PRIMARY	24	idrcw		

Figure 2 Ultra2 – Domains

Bulk Add / Remove UltraDNS² Domains

The **Add / Remove UltraDNS²** function allows you to select multiple domains (in bulk) to either apply the UltraDNS² service to or revert an UltraDNS² enabled domain back to a standard UltraDNS domain. By doing so, the Name Server (NS) record details that have already been configured and delegated for your account will be applied to those same NS records for the selected Domains. After the operation is completed, the selected Domain(s) will be UltraDNS² enabled, and the zone data will begin to flow between the UltraDNS and UltraDNS² networks.

Please be aware, that there are restrictions on the types of Domains that can be selected for this process. The following Domain types cannot be selected when performing the **Add** or **Remove UltraDNS²** function and will pause the operation and display an error message.

- Secondary Domains
- Alias Domains
- Domains in a Suspended status

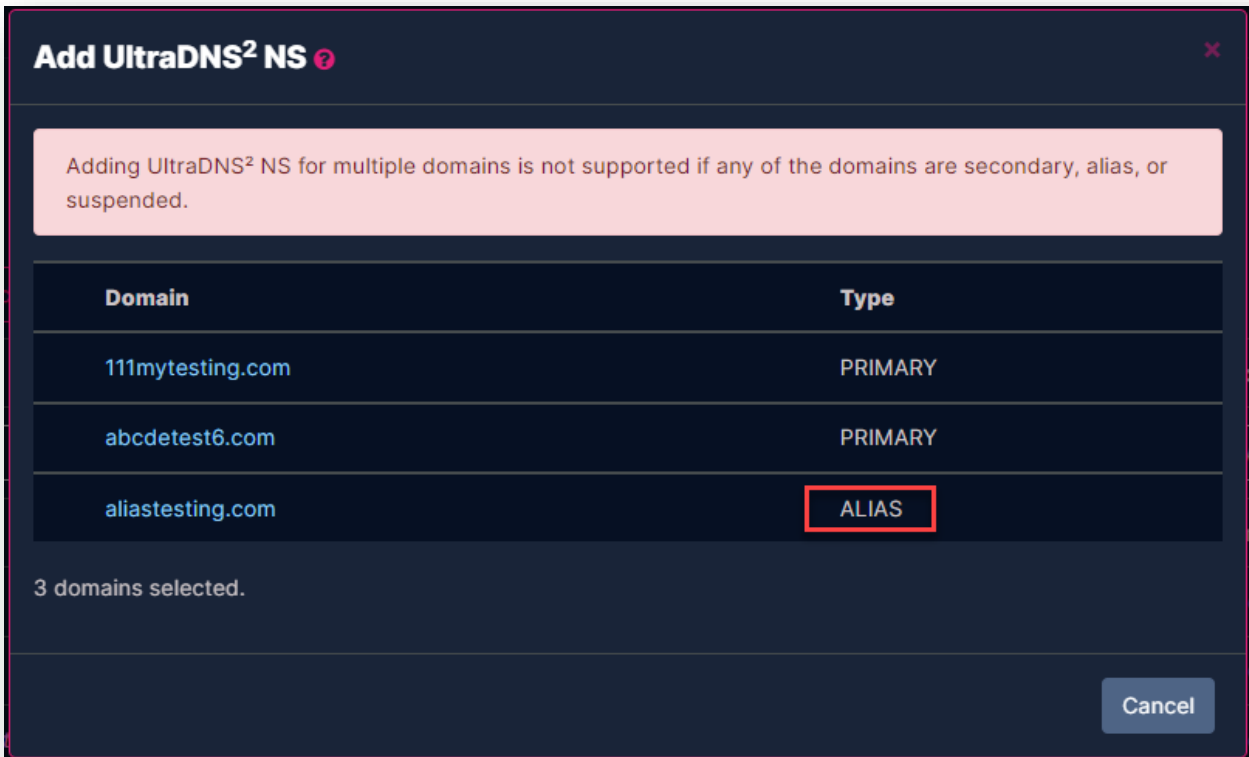


Figure 3 UltraDNS2 Bulk Add/Remove Error

SOA Change

Please be aware that performing either the **Add UltraDNS²** or **Remove UltraDNS²** function will change the **Serial** value on the Start of Authority (SOA) record for the selected Domain(s).

Add UltraDNS²

To perform the Add UltraDNS² operation, select at least one domain that does not violate the Domain restrictions listed above, and then click the **Add UltraDNS²** button. A confirmation window will appear listing the selected Domains, and if they violate the restrictions, or are available to be added to the **UltraDNS²** network. Click the **Submit** button to initiate the operation.

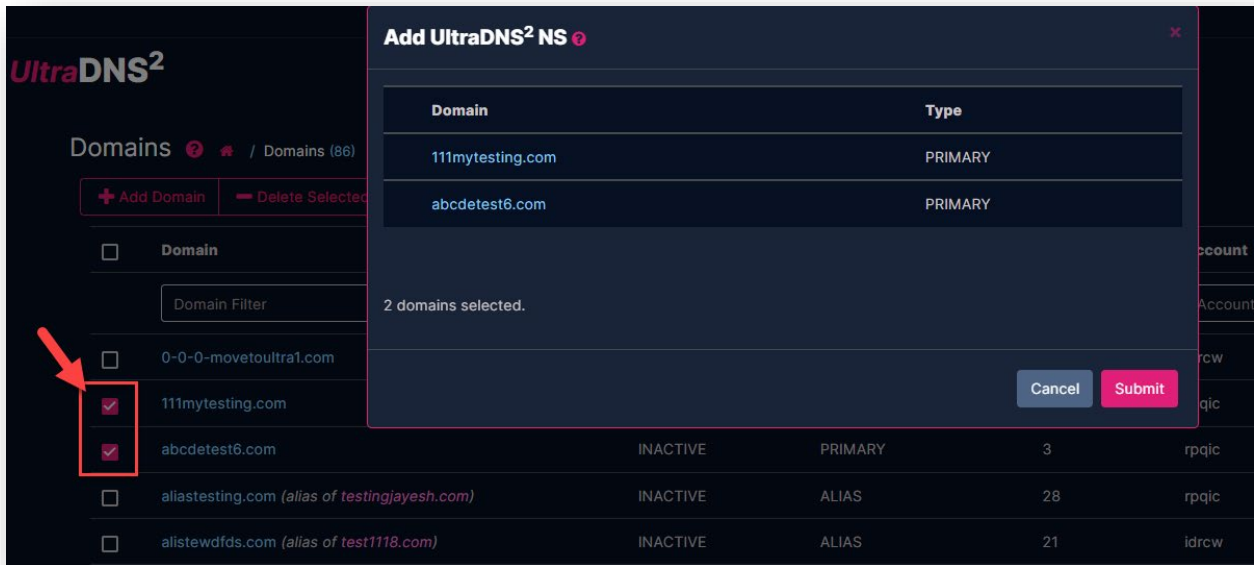


Figure 4 UltraDNS2 - Bulk Add Domains

After successful completion of the **Add UltraDNS²** operation, a .CSV file can be downloaded from the **Tasks List** that will display the selected Domains, and the confirmation of the added NS records.

Refresh the **Domains** list to see the updated status of the newly configured Domains.

Remove UltraDNS²

To perform the Remove UltraDNS² operation, select at least one domain that does not violate the Domain restrictions listed above, and then click the **Add UltraDNS²** button. By doing so, the Name Server (NS) record details that have been configured and delegated for your account will be removed, leaving you the basic UltraDNS NS records. After the operation is completed, the selected Domain(s) zone data will only flow to the UltraDNS network.

A confirmation window will appear listing the selected Domains, and if they violate the restrictions, or are available to be added to the **UltraDNS²** network. Click the **Submit** button to initiate the operation.

IMPORTANT: If removing the UltraDNS² NS records results in a Domain no longer having at least two (2) NS records configured, a message on the .CSV file will display "After removing the UltraDNS2 NS at least 2 NS records should be present." Please confirm that at least two UltraDNS configured NS records are configured for the Domain before trying the operation again.

Refresh the **Domains** list to see the updated status of the newly configured Domains.

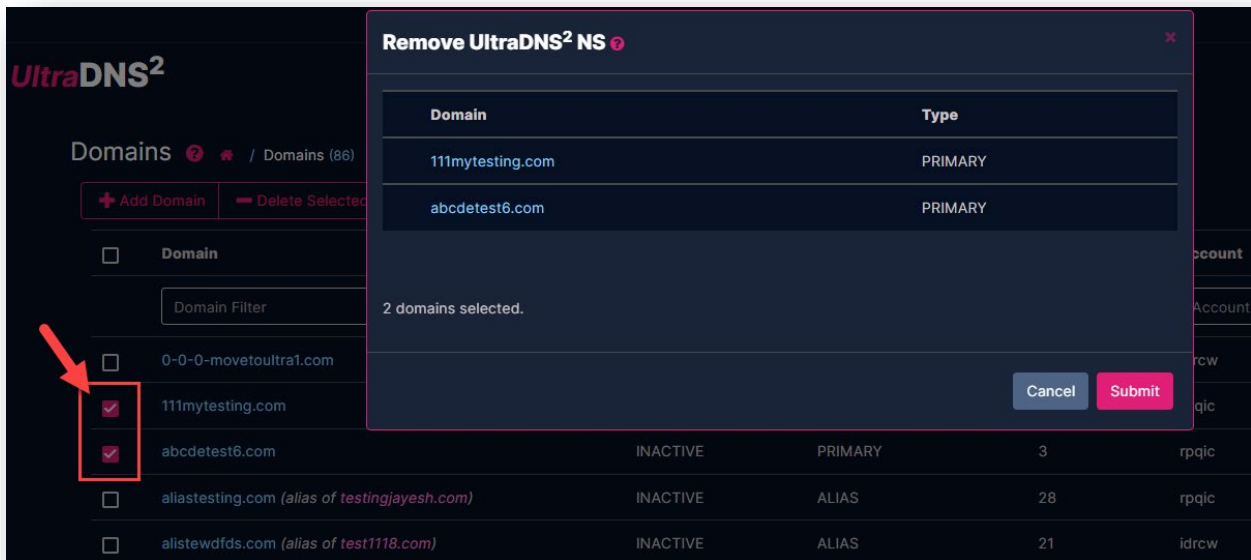


Figure 5 UltraDNS - Bulk Remove Domains

After successful completion of the Remove UltraDNS² operation, a .CSV file can be downloaded from the **Tasks List** that will display the selected Domains, and the status of the removed NS records.

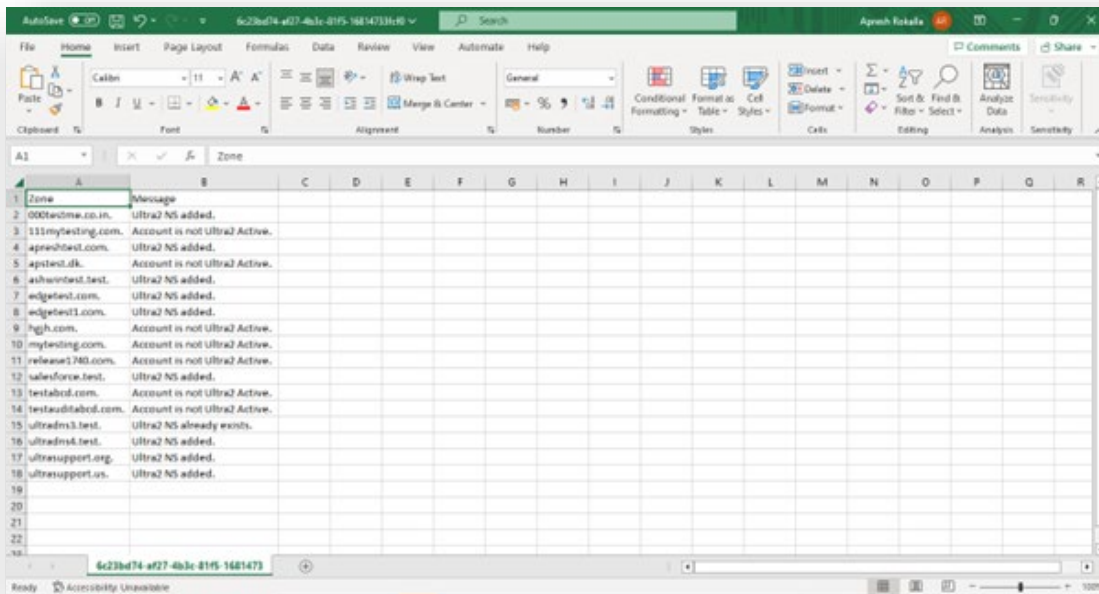
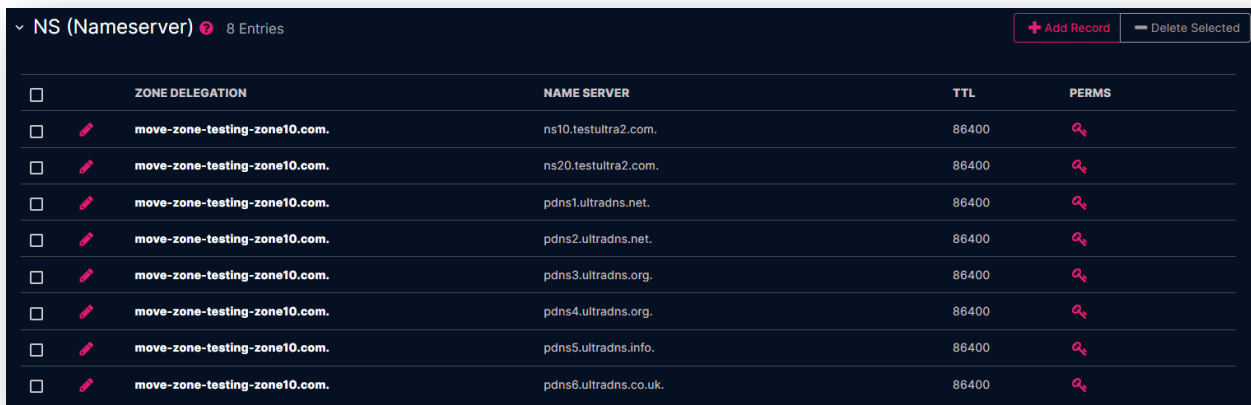


Figure 6 UltraDNS - Bulk Add/Remove CSV Output

Nameserver Records List

A significant change that users will notice are the number of Nameserver (NS) Records that will appear in their domain(s). UltraDNS customers have two default NS Records created for their account, while the UltraDNS² customers will now have eight NS (six from UltraDNS, and two from UltraDNS²) records.

- Two UltraDNS² NS records (.com and .org)
 - ns100.ultradns2.com.
 - ns100.ultradns2.org.
- Six UltraDNS NS records (.net, .org, .info, and .co.uk)
 - pdns1.ultradns.net
 - pdns2.ultradns.net
 - pdns3.ultradns.org.
 - pdns4.ultradns.org.
 - pdns5.ultradns.info.
 - pdns6.ultradns.co.uk.



















NS (Nameserver) 8 Entries		+ Add Record - Delete Selected	
<input type="checkbox"/>	ZONE DELEGATION	NAME SERVER	TTL PERMS
<input type="checkbox"/>	 move-zone-testing-zone10.com.	ns10.testultra2.com.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	ns20.testultra2.com.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	pdns1.ultradns.net.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	pdns2.ultradns.net.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	pdns3.ultradns.org.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	pdns4.ultradns.org.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	pdns5.ultradns.info.	86400 
<input type="checkbox"/>	 move-zone-testing-zone10.com.	pdns6.ultradns.co.uk.	86400 

Figure 7 UltraDNS² - NameServer Records



Just as before, we highly recommend that customers do not delete any of these default NS Records, as doing so could cause significant issues for your domain.

Reports

Query Analytics

The Query Analytics Report page is comprised of two reports: the Zone Query Details Report, and the Host Query Details Report.

The **Zone Query Details Report** is designed to provide aggregated zone query volumes for multiple zones within your account, which will be displayed by default when clicking on the Query Analytics report from the list of available reports.

The **Host Query Details Report** provides aggregated host query volumes for one or all hosts within a zone. This report is implemented as a “drill down” report, designed to get more granular information on a host basis from the Zone Query Details Report.

For users with access to multiple accounts, you can specify the Account in which you want to view the responses for. To view this report, click on the **Reports** tab on the left-hand side of the screen, and then from the drop-down list, select **Query Analytics**.

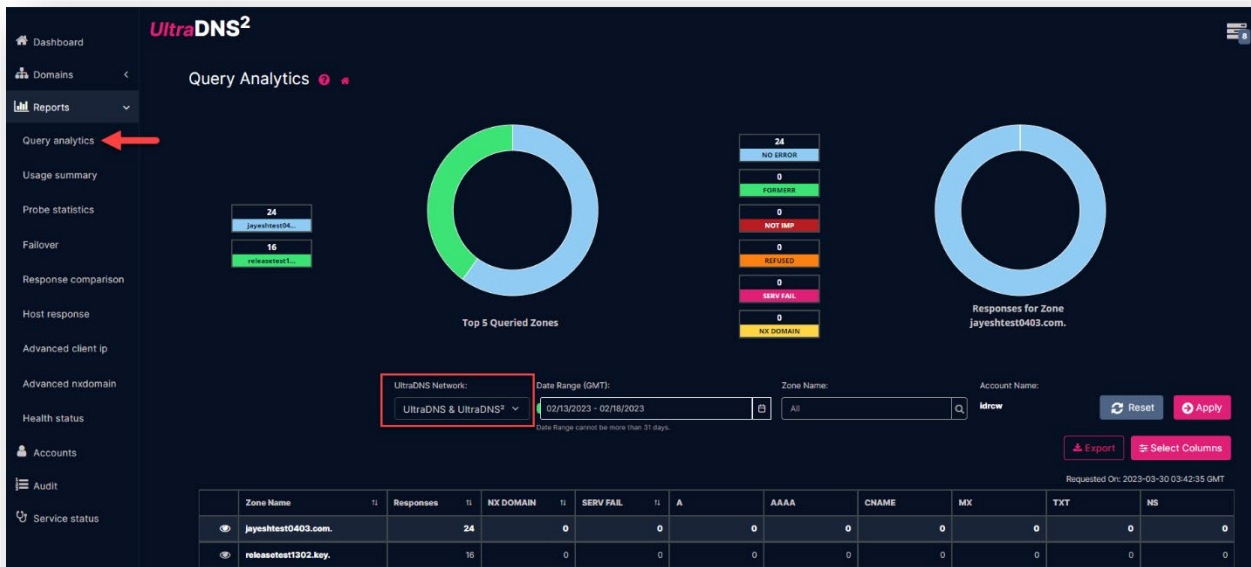


Figure 8 Reports - Query Analytics - Zone Query Details Report

Upon loading the report, you’ll see two charts displaying zone query results, as well as a table of all the zone names you currently have access to.

For Ultra2 enabled accounts, the Query Analytics report will display an additional configuration drop-down menu, that allows users to change the view of the report details. The report data and table columns will display the same type of data, but this allows our Ultra2 customers greater flexibility to see their data in greater granularity.

UltraDNS – Selecting this option from the drop-down menu will only display the standard zones that are configured for the UltraDNS service.

UltraDNS2 – Selecting this option from the drop-down menu will only display the zones that are configured using the Ultra2 feature.

UltraDNS & UltraDNS2 – Selecting this option from the drop-down menu will display all zones of the available zones for the account being displayed.

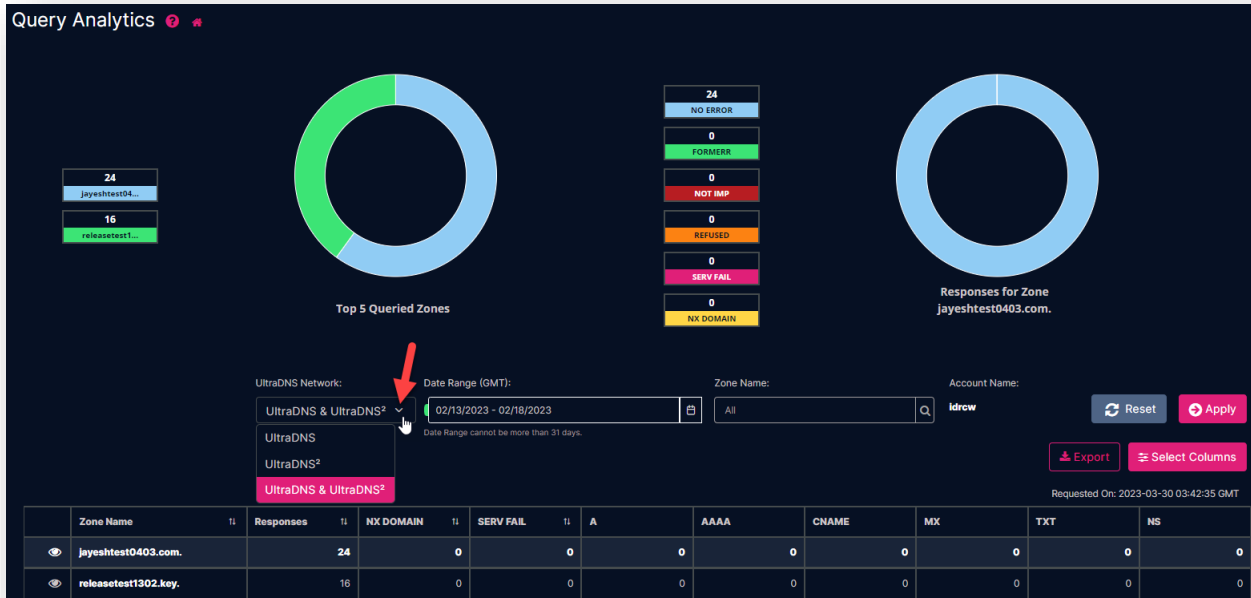


Figure 9 Query Analytics - Ultra2 Enabled - Dropdown Menu

Please note that when selecting UltraDNS & UltraDNS2 as the dropdown option, the displayed report data will not indicate which zone is the UltraDNS, and which is UltraDNS2. We recommend one of two options as a workaround.

- 1) Export the **UltraDNS** and the **UltraDNS2** reports individually so that you can clearly identify which zones are associated to each feature.
- 2) Export the **UltraDNS & UltraDNS2** report data and then compare the exported zone list to the **Domains** page, which has the column indicating which zone is Ultra2 enabled.

Account Info

The final location that UltraDNS² customers will notice a change is on the Accounts section of the account. The Assigned Name Servers section on the Accounts Info page will display the eight new NS records that have been assigned to the account.

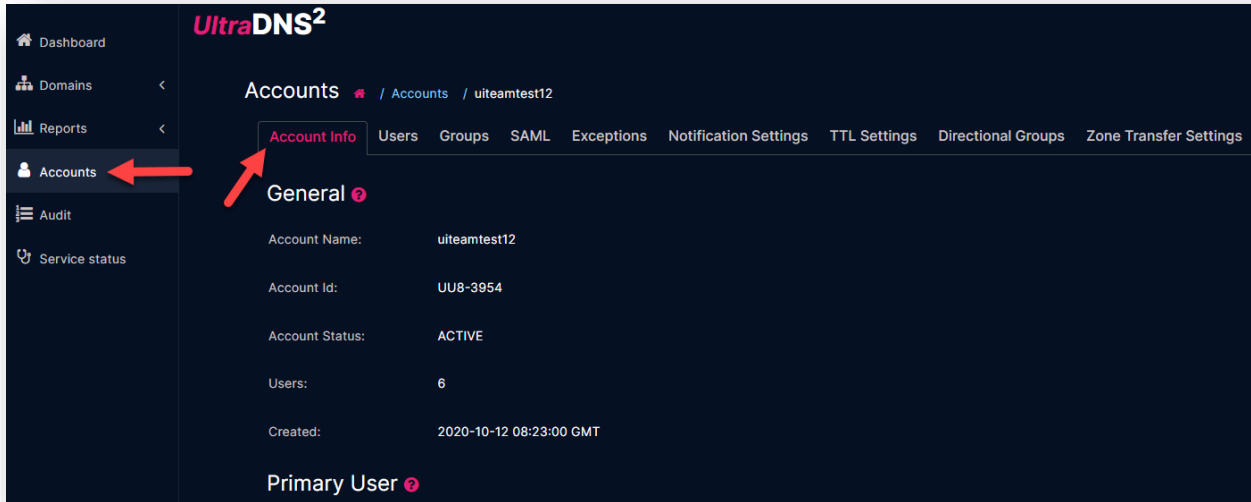


Figure 10 UltraDNS² - Account Info

Assigned Name Servers		
Name Server	IPv4 Address	IPv6 Address
pdns1.ultradns.net.		
pdns2.ultradns.net.		
pdns3.ultradns.org.		
pdns4.ultradns.org.		
pdns5.ultradns.info.		
pdns6.ultradns.co.uk.		
ns1.testultra2.com.		
ns2.testultra.com.		

Figure 11 UltraDNS² - Assigned Name Servers List

API Changes

To coincide with the Portal changes, we have made a slight update to our REST API to indicate those NS records that are UltraDNS² generated.

Resource Record Set (RRSet) DTO

Attribute	Description	Type	Required?
ownerName	<p>The domain name of the owner of the RRSet. Can be either: Fully Qualified Domain Name (FQDN) Relative Domain Name.</p> <p>If a FQDN, it must be contained within the zone name FQDN.</p>	String	<p>NO for PUT, POST, or PATCH calls. Ignored if present.</p> <p>Not present (and ignored if present) if this RRSet is embedded inside of an Owner structure.</p>
rrtype	<p>Resource Record Type for the RRSet.</p> <p>Must be formatted as the well-known resource record type (A, AAAA, TXT, etc.) and the corresponding number for the type, between 1 and 65535 or a known resource record name (A, AAAA, SRV, etc.).</p>	String	<p>NO for PUT, POST, or PATCH calls. Ignored if present.</p> <p>Not present (and ignored if present) if this RRSet is embedded inside of an Owner structure.</p>
ownerName	<p>The domain name of the owner of the RRSet. Can be either: Fully Qualified Domain Name (FQDN) Relative Domain Name.</p> <p>If a FQDN, it must be contained within the zone name FQDN.</p>	String	<p>NO for PUT, POST, or PATCH calls. Ignored if present.</p> <p>Not present (and ignored if present) if this RRSet is embedded inside of an Owner structure.</p>
rrtype	<p>Resource Record Type for the RRSet.</p> <p>Must be formatted as the well-known resource record type (A, AAAA, TXT, etc.) and the corresponding number for the type, between 1 and 65535 or a known resource record name (A, AAAA, SRV, etc.).</p>	String.	<p>NO for PUT, POST, or PATCH calls. Ignored if present.</p> <p>Not present (and ignored if present) if this RRSet is embedded inside of an Owner structure.</p>
tTL	<p>The time to live (in seconds) for all records in the RRSet. Must be a value between 0 and 2147483647, inclusive.</p>	Integer	<p>Should be included in PUT, POST or PATCH calls.</p> <p>If TTL is not specified, the value set at the account level (either for record type or global setting) will be used.</p>

Attribute	Description	Type	Required?
rdata	<p>The data for the records in the RRSet.</p> <p>Must use the BIND presentation format for the specified rrtype.</p> <p>For MX, NS, CNAME, PTR, and APEXALIAS record types, the rdata value cannot be relative to the zone name. It must be a FQDN.</p> <p><i>If rrtype is MX, entering "0." will create a NULL MX record, implying that "No Service" is available for the server / record.</i></p>	Array	<p>REQUIRED for PUT, POST, or PATCH calls. Must include BIND formatted data.</p> <p><i>If a null MX record exists for a zone, no additional MX records are allowed. Additionally, if an MX record exists within a zone, a Null MX record cannot be created.</i></p>
systemGenerated	<p>Indicates whether the record in an rdata list is system generated or not.</p> <p>It represents the Boolean value that corresponds to the record in the list (in same order the records are returned).</p>	Array (Boolean)	<p>Will be returned for GET requests when used as the query parameter systemGeneratedStatus.</p> <p>If the query parameter is set to true, then the attribute name will be returned in the response.</p> <p>Ignored for PUT/PATCH/POST requests.</p>
ultra2SystemGenerated	Indicates whether the nameserver in an rdata list is generated by the Ultra2 system or not.	Array (Boolean) corresponding to the nameserver in the list.	'ultra2SystemGenerated' will only be returned for those accounts which have Ultra2 enabled, as well as the associated NS records.

JSON Example: Results for Ultra2 enabled account

```
{
  "zoneName": "abc.com.",
  "rrSets": [
    {
      "ownerName": "abc.com.",
      "rrtype": "NS (2)",
      "ttl": 86400,
      "rdata": [
        "ns1.hostingsvcs.com.",
        "ns2.hostingsvcs.com.",
        "udns1.ultradns.net.",
        "udns2.ultradns.net."
      ],
      "systemGenerated": [
        false,
        false,
        true,
        true
      ],
      "ultra2SystemGenerated": [
```

```

        true,
        true,
        false,
        false
    ]
  }
],
"queryInfo": {
  "q": "kind:ALL",
  "sort": "OWNER",
  "reverse": false,
  "limit": 50
},
"resultInfo": {
  "totalCount": 1,
  "offset": 0,
  "returnedCount": 1
}
}

```

Zone API and DTO

When performing a GET Zone API call, the “ultra2” parameter will be returned with either a “true” or “false” to indicate if the zone is UltraDNS² configured. This new attribute will be returned for all GET Zone API calls.

<https://api.test.ultradns.net/v3/zones/>

Table 1 Zone Properties DTO

Attribute	Description	Type
name	Name of the zone, with trailing periods (...)	Must be a valid domain name. Required for zone creation. Ignored if present on update.
accountName	Name of the account.	String. Required for zone creation. Ignored if present on update.
type	Type of zone. Valid values are PRIMARY, SECONDARY or ALIAS.	Required for zone creation. Ignored if present on update.
owner	Name of the user that created the zone.	String. Returned in GET responses for zone information. Ignored if present on create or update.

Attribute	Description	Type
recordCount	Number of records in the zone.	Integer. Returned in GET responses for zone information. Ignored if present on create or update.
dnssecStatus	Whether or not the zone is signed with DNSSEC. Valid values are SIGNED or UNSIGNED.	Returned in GET responses for zone information. Ignored if present on create or update.
lastModifiedDateTime	The last date and time the zone was modified, represented in ISO8601 format.	Returned in GET responses for zone information. Ignored if present on create or update.
ultra2	Only applicable to accounts that have enabled the UltraDNS ² service. Indicates if the zone has UltraDNS ² enabled or not. Valid values are false and true.	Boolean. Returned in GET responses for zone information.

JSON Example: GET Zones with ultra2 parameter

```

"queryInfo": {
  "q": "",
  "sort": "name",
  "reverse": false,
  "limit": 100
},
"cursorInfo": {
  "next": "MTByZWNVcmRzLTEwODUuY29tLjpwORVhU",
  "last": "fjpmQVNU"
},
"zones": [
  {
    "properties": {
      "name": "0-0-0oxfr-ut9-test.com.",
      "accountName": "javaue2e",
      "type": "PRIMARY",
      "dnssecStatus": "UNSIGNED",
      "status": "ACTIVE",
      "owner": "javaue2e",
      "resourceRecordCount": 5,
      "lastModifiedDateTime": "2022-09-27T05:06Z",
      "ultra2": false
    }
  },
  {

```

```

    "properties": {
      "name": "007-tosha.com.",
      "accountName": "javaui2e",
      "type": "PRIMARY",
      "dnssecStatus": "UNSIGNED",
      "status": "ACTIVE",
      "owner": "javaui2e",
      "resourceRecordCount": 8,
      "lastModifiedDateTime": "2020-06-24T07:19Z",
      "ultra2": true
    },
  },

```

To specifically return only UltraDNS² enabled zones (or only those on the UltraDNS (standard) network), a new query parameter “network” has been added.

```
https://api.test.ultradns.net/v3/zones?q=network:ultra2
```

Table 2 Parameters for List Metadata for Zones

Attribute	Description	Type
q	<p>The query used to construct the list. Query operators are:</p> <ul style="list-style-type: none"> ▪ name – Name of the zone (allowing for partial string matches). ▪ zone_type – Returns zones of an identified type. If not specified, all zone types are returned. Valid values are: <ul style="list-style-type: none"> ○ ALIAS ○ PRIMARY ○ SECONDARY ▪ zone_status – Returns zones with the identified status. ALL zones are returned if not specified. Valid values are: <ul style="list-style-type: none"> ○ ACTIVE ○ SUSPENDED ○ ALL ▪ account_name – Returns the zones based upon the account. If not specified, zones of all the accounts that the user has access to will be returned. <p>If the account name has space characters in it, the space characters need to be replaced with “%20.” For example, account “test account” will need to be “test%20account.”</p> ▪ network – <u>Only applicable for those accounts with the UltraDNS² feature enabled.</u> Returns zones that are either on the UltraDNS (standard) network or are part of the UltraDNS² feature network. Valid values are: <ul style="list-style-type: none"> ○ ultra1 (standard UltraDNS) ○ ultra2 	String.

Attribute	Description	Type
cursor	Can be provided after the initial List Metadata for Zones request. Use with the cursorInfo details for fetching the next , previous , first or last page(s) of details.	String, Optional.
limit	The maximum number of rows requested. Default is 100.	Integer. Optional.

Customer Support Info

Clicking on the **Contact Us** link will direct you to the immediate contact information for the UltraDNS Managed Services Support staff, as well as provide additional contact information.

Clicking the **Support Portal** will navigate you to the Customer Support portal where customer service tickets can be created, and additional resources can be found.

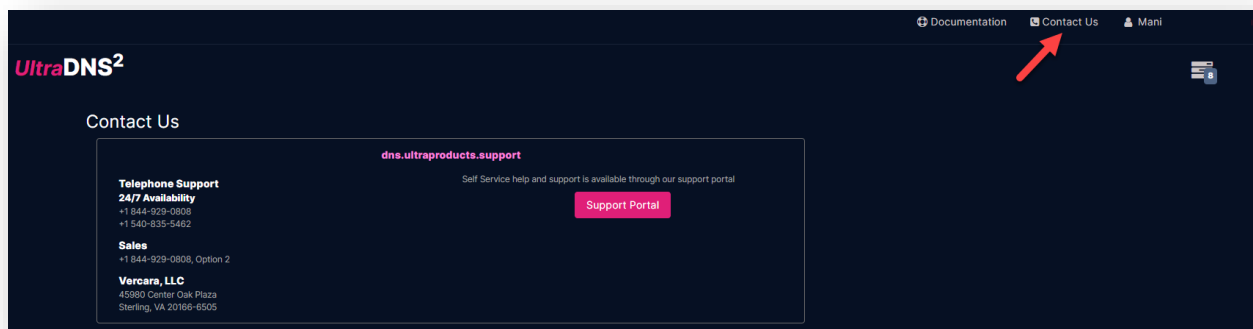


Figure 12 Contact Us