

Real-Time Price & Availability XML Specification

USA and Canada

Revision History

Version	Changes Noted	Author
Version 3.35 (11/10/2014)	XML Formatting for better readability and contact info updates	Anand Pathak
Version 3.34 (05/31/2013)	Additional warehouse added for Canada customers (Previously Supercom)	Donovan A. Smith
Version 3.33 (03/15/2010)	Updates to SYNNEX Warehouse Locations	Donovan A. Smith
Version 3.33 (03/15/2009)	Addition of Appendix C, removal of HTTP:// URL reference	Donovan A. Smith
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Version 3.32 (06/11/2008)	Updates to SYNNEX Warehouse Locations	Donovan A. Smith
Version 3.32 (08/13/2007)	Updates to SYNNEX Warehouse Locations	Donovan A. Smith
Version 3.32 (09/29/2006)	Updated content lists and tables, additional search options noted in document.	Donovan A. Smith
Version 3.32 (12/01/2005)	Addition of visibility of MFG Drop Ship Warehouse Stock Qty (Limited MFG)	Donovan A. Smith
Version 3.31 (10/31/2005)	Additional warehouse added for Canada customers (Joint US/Canada Warehouse)	Donovan A. Smith
Version 3.30 (09/15/2005)	Minor updates, and addition of Special Deal Number Code & Primary ETA Date into responses.	Donovan A. Smith
Version 3.20 (05/27/2005)	Addition of Multiple Pricing Option Query, and pricing level identification table.	Donovan A. Smith
Version 3.10 (12/20/2004)	Minor typographical corrections, addition of 2 Canada warehouse locations	Donovan A. Smith
Version 3.0 (04/12/2004)	Added Government and Education Prices Also added version tag, so customer using older version will not be impacted.	Donovan A. Smith
Version 2.1 (05/15/2003)	1. We made some functions enhancement per customer's feedback: 1) If a sku is not authorized for customer to buy, we return 'Not authorized' (In earlier versions, we return price = -\$1.0) 2) If a sku is discontinued, we return 'Discontinued' (In earlier versions, we return 'Not found' 3) If a sku SYNNEX does not have record in some of our warehouse, we still response all warehouses. (In earlier versions, we only response the warehouses which we have records, it caused mapping inconvenience to some of our customers) 2. We enhanced the 'How To Send XML To SYNNEX' in this version	Donovan A. Smith
Version 2.0 (04/01/2003)	Updated Layout, and added new content (e.g. Warehouse list)	Donovan A. Smith
Version 1.5 (12/29/2002)	We made overall enhancement in this version of spec, which includes: Added the functions of 'Query by Manufacturer Number' and 'Get Availability Only', also added XML DTD and Schema, and addressed the frequently asked questions from our customers.	Donovan A. Smith
Version 1.0 (2001)	First release	Donovan A. Smith

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Introduction

In order to serve various needs of our resellers, SYNNEX is now offering different flavors of XML Price and Availability services.

- 1. Query by SYNNEX sku_no (Sku Number) This option preferred.
- 2. Query by Manufacturer Part Number this is a new function available since 3Q'02, targeted for customers who want to enjoy the XML but is not able to maintain conversion database of reseller's part and SYNNEX' part. Please be aware that if a Manufacturer Part Number contains multiple SYNNEX skus, then we will return multiple results in XML response. SYNNEX vendors are also using this service to know our real time inventory as part of collaborative e-commerce.
- 3. Separate URL's to get "Price and Availability" or "Availability Only (no Price)" A majority of resellers use XML to look up Inventory (Availability), while they are not using this to get price as most of them already are getting prices from SYNNEX nightly data feeds. Therefore, we are providing a separate URL, which takes the same query; but provides a different response with an empty price field. The reason we are doing this is to provide the faster response time, as price calculation consumes the majority of the processing time.

This document was prepared in a more intuitive format to introduce SYNNEX XML capability and requirements, and is intended not only for our customers' IT team but also for the business teams to read. This is why we provide direct examples within this documentation, as XML is meant to be self-explanatory.

At the end of this document, we also provide a "how-to" for our customers to submit a test XML and receive back an XML Response. This is a great tool for our customers to test XML even before their system development and integration has been completed.

Having read this document, you will find XML implementation is not as difficult as expected, and you will find that implementation of the EDI/XML partnership with SYNNEX is rather enjoyable.

It is our pleasure to offer this service to our customers. As XML is still relatively new in the industry (compared with EDI), there is more room for improvement. We would like to invite you to grow with us in this field of XML. Please do not hesitate to provide us with any comments or feedback.

<u>Please Note:</u> SYNNEX XML / Web Services Team recommends that the reseller obtain access to the nightly price and availability file offered by SYNNEX prior to implementing this XML service, so they will have a database of products on hand to integrate this XML service into their backend, as well as provide a base of data to query against when developing web-based applications or storefronts.

SYNNEX XML / Web Services Department (XMLGroup@synnex.com)

Examples

(Note: All examples below are using a US demo account and US sku, Canada side should use Canadian demo account and Canadian skus.)

1. Query Price and Availability Using SYNNEX sku_no (One Sku) with addition of On Order Qty and ETA Date

XML request:

```
<?xml version="1.0" encoding="UTF-8" ?>
ceResponse>
   <customerNo>YOUR ACCOUNT NUMBER</customerNo>
   <userName>YOUR ID</userName>
   <Pri ceAvailabilityList>
      <synnexSKU>439866</synnexSKU>
      <mfaPN>108R00645</mfaPN>
      <mfgCode>13439</mfgCode>
      <status>Acti ve</status>
      <description>IMAGING UNIT, PHASER 6300/6350</description>
      <GI obal ProductStatusCode>Acti ve</GI obal ProductStatusCode>
      <pri ce>228. 48</pri ce>
      <total Quanti ty>240</total Quanti ty>
      <AvailabilityByWarehouse>
         <warehouseInfo>
            <number>3</number>
            <zi pcode>94538</zi pcode>
            <ci ty>Fremont, CA</ci ty>
            <addr>44211 Nobel Drive</addr>
         </warehouseInfo>
         <qty>30</qty>
      </AvailabilityByWarehouse>
      <AvailabilityByWarehouse>
         <warehouseInfo>
            <number>4</number>
            <zi pcode>30071</zi pcode>
            <ci ty>Norcross, GA</ci ty>
            <addr>200 Best Friend Court, Suite# 250</addr>
         </warehouseInfo>
         <qty>27</qty>
      </AvailabilityByWarehouse>
      <AvailabilityByWarehouse>
         <warehouseInfo>
            <number>5</number>
```

2. Query Price and Availability Using Manufacturer P/N (One Sku)

XML request:

XML response:

XML response is identical to the response of example 1.

3. Query Availability Only, Using SYNNEX sku_no (One Sku)

XML request:

The request is the same as example 1, the only difference is we send to different URL (Pls refer to 'How To Send XML to SYNNEX' section to get a list of URL), and priceRequest version="3.0"> tag.

Example:

XML response:

XML response is similar to example 1. The only difference is <pri>eprice> tag is empty.

4. Query Price and Availability Using SYNNEX Price Type Code

XML request:

```
<?xml version="1.0" encoding="UTF-8" ?>
<pri ceResponse>
   <customerNo>YOUR ACCOUNT NUMBER</customerNo>
   <userName>YOUR ID</userName>
   <Pri ceAvailabilityList>
      <synnexSKU>439866</synnexSKU>
      <mfgPN>108R00645</mfgPN>
      <mfqCode>13439</mfqCode>
      <status>Acti ve</status>
      <description>IMAGING UNIT, PHASER 6300/6350</description>
      <GI obal ProductStatusCode>Acti ve</GI obal ProductStatusCode>
      <pri ce>228. 48</pri ce>
      <pri>ceType>Education</pri ceType>
      <total Quanti ty>240</total Quanti ty>
      <AvailabilityByWarehouse>
      </AvailabilityByWarehouse>
      ! i neNumber>1
   </PriceAvailabilityList>
</pri ceResponse>
```

5. Query Price and Availability Using SYNNEX Special Deal # Code

(Note: Special Deal # represents code assigned by SYNNEX or Product Manufacturer to identify special pricing assigned to customer for Special Opportunities.)

XML request:

XML response:

```
<?xml version="1.0" ?>
<pri ceResponse>
   <customerNo>YOUR ACCOUNT NUMBER</customerNo>
   <userName>YOUR ID</userName>
   <Pri ceAvailabilityList>
      <synnexSKU>256711</synnexSKU>
      <mfgPN>32P0724</mfgPN>
      <mfgCode>10504</mfgCode>
      <status>Acti ve</status>
      <description>73.4G 10Krpm U320 SCSI HDD</description>
      <GI obal ProductStatusCode>Acti ve</GI obal ProductStatusCode>
     <pri ce>286. 41</pri ce>
      <special Deal Number>2005B069</special Deal Number>
      <total Quanti ty>33</total Quanti ty>
      <AvailabilityByWarehouse>
      </AvailabilityByWarehouse>
      neNumber>1
   </PriceAvailabilityList>
</pri>
```

6. Query Price & Availability with Multiple SYNNEX sku_no XML request:

```
</lineNumber>2</lineNumber>
</skuList>
</pri ceRequest>
```

XML response:

XML response is similar to example 1. The only difference is we got another <PriceAvailabilityList> loop.

7. Query Price & Availability with invalid SYNNEX sku_no

XML request:

8. Query Price & Availability with invalid Manufacturer P/N

Same result as example above.

9. Query Price & Availability with Multiple sku, one sku is invalid

XML request:

First sku is valid, customer will get the normal response. Second sku is invalid, the response is:

10. Query Price & Availability with Discontinued Sku

XML request:

XML response:

11. Query Price & Availability with Sku Not Authorized To Buy

XML request:

The request is the same as example 1, but we use the Sku which customer is not authorized to buy (in this example, we use customer_no 124856, sku_no 135048)

12. Query Price & Availability with OnOrderQuantity and ETA

XML request:

```
<?xml version="1.0" encoding="UTF-8" ?>
<pri ceResponse versi on="2.1">
   <customerNo>YOUR ACCOUNT NUMBER</customerNo>
   <userName>YOUR ID</userName>
   <Pri ceAvailabilityList>
      <synnexSKU>170421</synnexSKU>
      <mfgPN>263825-B21</mfgPN>
      <mfgCode>13208</mfgCode>
      <status>Acti ve</status>
      <description>Integrated Lights-Out Advance Pack</description>
      <Global ProductStatusCode>Active-'206'</Global ProductStatusCode>
      <pri ce>258. 47</pri ce>
      <total Quanti ty>667</total Quanti ty>
      <AvailabilityByWarehouse>
         <warehouseInfo>
            <number>2</number>
            <zi pcode>89030</zi pcode>
            <ci ty>North Las Vegas, NV</ci ty>
            <addr>4150 Industrial Center Dr., Suite# 610</addr>
         </warehouseInfo>
         <qty>12</qty>
      </AvailabilityByWarehouse>
      <AvailabilityByWarehouse>
         <warehouseInfo>
            <number>3</number>
            <zi pcode>94538</zi pcode>
            <ci ty>FREMONT, CA</ci ty>
            <addr>44211 Nobel Drive</addr>
         </warehouseInfo>
         <qty>37</qty>
         <onOrderQuanti ty>84</onOrderQuanti ty>
         <esti matedArri val Date>20060926</esti matedArri val Date>
```

.....

13. Query Price & Availability with Specific Warehouse Number Requested

XML request:

```
<?xml version="1.0" encoding="UTF-8" ?>
  <pri><pri ceRequest version="2.3">
     <customerNo>YOUR ACCOUNT NUMBER</customerNo>
     <userName>YOUR ID</userName>
     <password>YOUR PASSWORD</password>
     <skuLi st>
        <synnexSKU>439866</synnexSKU>
        I i neNumber>1
        <requestWarehouse>3, 12</requestWarehouse>
     </skuList>
     <skuLi st>
        <synnexSKU>1058926</synnexSKU>
        I i neNumber>2
        <reguestWarehouse>5</reguestWarehouse>
     </skuList>
```

XML response:

Note: Only the warehouse numbers requested are responded back with data.

```
<?xml version="1.0" encoding="UTF-8" ?>
   <pri ceResponse versi on="2.3">
      <customerNo>YOUR ACCOUNT NUMBER</customerNo>
      <userName>YOUR ID</userName>
      <Pri ceAvailabilityList>
         <synnexSKU>439866</synnexSKU>
         <mfgPN>108R00645</mfgPN>
         <mfgCode>13439</mfgCode>
         <status>Acti ve</status>
         <description>IMAGING UNIT, PHASER 6300/6350</description>
         <Gl obal ProductStatusCode>Acti ve</Gl obal ProductStatusCode>
         <pri ce>228. 48</pri ce>
         <total Quanti ty>240</total Quanti ty>
         <AvailabilityByWarehouse>
            <warehouseInfo>
               <number>3</number>
               <zi pcode>94538</zi pcode>
               <city>Fremont, CA</city>
               <addr>44211 Nobel Drive</addr>
            </warehouseInfo>
            <qty>30</qty>
         </AvailabilityByWarehouse>
         <AvailabilityByWarehouse>
            <warehouseInfo>
               <number>12</number>
               <zi pcode>91761</zi pcode>
               <ci ty>Ontari o, CA</ci ty>
```

Data Description

Legend:

AN – Alphanumeric DT – Date / Time

ID – Single Value Code N – Number

1. XML Request

Field ID	Name	Description	Req. /Opt	Data Typ e	Max Length	Data Example	SYNNEX Internal Use
HDR-001A	priceRequest	<pre><pricerequest version="3.0"> Please Note: Tag Required when Availability only query requested (see example above)</pricerequest></pre>	С	AN	**	See Description	
HDR-001	customerNo	SYNNEX assigned customer account number This is the same account number our customer is using to log in SYNNEX web (www.synnex.com).		N	10	YOUR ACCOUNT NUMBER	
HDR-002	userName	This is the same account name our customer is using to log in SYNNEX web (www.synnex.com). The account administrator in customer side can create as many user names with different authorities. For detail information, please refer to SYNNEX ECEXPRESS guide. Also, our web has the '3 months password auto expiration' security protection feature for those "user name" which was set up to be able to place PO. We suggest you use the read-only user name in this XML service to prevent password expiration.	R	AN	20	YOUR ID	
HDR-003	password	This is the same password customer used to log in SYNNEX ECEXPRESS	R	AN	20	YOUR PASSWORD	
SKU-001	synnexSKU	SYNNEX sku_no Either synnexSKU or MFGPN need to be populated	0	N	8	175813	
SKU-001	mfgPN	Manufacturer Part Number	0	AN	25	ABCD1234	
SKU-002	lineNumber	Item Line Number Note: If customer sends multiple skus in the request, then this field is recommended to be populated, as it will help customer to better link request with response.	0	N	25	1	
SKU-003	priceType	Price Type Identification, if not used response will default to Regular Contract Price as a response. Price Type Query Values: FEDERALGOVERNMENT STATEGOVERNMENT EDUCATION	0	AN	12	8.59	
SKU-003	specialDealNumber	REGULAR PROMOTION Special Deal # Code	0	AN	25	2005B069	

2. XML Response

Field ID	Name	Description	Req. /Opt	Data Typ e	Max Length	Data Example	SYNNEX Internal Use
HDR-001	customerNo	SYNNEX assigned customer account number This is the same account number our customer is using to log in SYNNEX web (www.synnex.com).		N	10	YOUR ACCOUNT NUMBER	
HDR-002	userName	This is the same account name our customer is using to log in SYNNEX web (www.synnex.com). The account administrator in customer side can create as many user names with different authorities. For detail information, please refer to SYNNEX ECEXPRESS guide. Also, our web has the '3 months password auto expiration' security protection feature for those "user name" which was set up to be able to place PO. We suggest you use the readonly user name in this XML service to prevent password expiration.	R	AN	20	YOUR ID	
SKU-001	SynnexSKU	SYNNEX sku_no	R	N	8	175813	
SKU-002	MfgPN	Manufacturer Part Number	R	AN	25	175813	
SKU-003	MfgCode	SYNNEX internal code for manufacturer	R	N	8	13208	
SKU-004	Status	Status of sku. Possible value are 'Active', 'Discontinued', 'Not found'		AN	12	Active	
SKU-005	Description	Sku description		AN	40	HP Laser Jet Color 4600N	
SKU-006	GlobalProductStatus Code	Status of sku. Possible value are 'Active', 'Discontinued', 'Not found'	R	AN	12	Active	
SKU-007	Price	Price for reseller, with Price Type Identified as XML tag, with possible additional elements related to response query.		N2	10	123.45	
SKU-007	PriceType	Price Type Identification, if not used response will default to Regular Contract Price as a response.		N2	12	8.59	
SKU-007	specialDealNumber	Special Deal # Code	0	AN	25	2005B069	
SKU-008	TotalQuantity	Total Quantity. This is the 'available to sell' quantity. (Allocated qty already excluded.)	R	N	8	55	
WHS-001	Warehouse number	ID of SYNNEX' warehouse, Pls find warehouse list in the end of this document	R	N	3	2	
WHS-002	Zipcode	Zip code of the warehouse	R	N	5	84104	
WHS-003	City	City and State where the warehouse is located	R	AN	30	Salt Lake City, UT	
WHS-004	Addr	Street address where the warehouse is located	R	AN	35	1860 South 4370 West	
WHS-005	Qty	Available to sell quantity of this warehouse	R	N	5	12	
WHS-006	OnOrderQuantity	Qty on Order for Specific Warehouse	0	N	5	50	
WHS-007	estimatedArrival Date	Product Receipt ETA Date	0	DT	8	20050826	

Testing & Production with SYNNEX

1. By using your web browser, go to our test web site at...

https://ec.synnex.com/microsite/b2b/index.html

The role of this web page is for customers to test send XML to SYNNEX' test system over the Internet and receive XML response. This is a great tool for customers to test and understand SYNNEX XML interface before customer's development and integration. Customer can also edit the default XML file to test various scenarios.

- 2. Customer to conduct testing & integration of XML in their system using demo account
- 3. End-to-end integration testing
- 4. Pilot run using customer' account/password
- 5. Deployment (Go live!)

How To Send XML To SYNNEX

1. URL to receive XML request

US:

https://ec.synnex.com/SynnexXML/PriceAvailability

https://ec.synnex.com/SynnexXML/Availability (this is to get availability only) *

Canada:

https://ec.synnex.ca/SynnexXML/PriceAvailability

https://ec.synnex.ca/SynnexXML/Availability (this is to get availability only) *

Please Note:

1) The HTTPS:// URL(s) above are used for production as well as testing.

Please Note: HTTP:// URL(s) cannot be used, only secure HTTPS:// URL(s) listed above are allowed.

- 2) If customer needs to do perform a high volume 'stress test', please inform SYNNEX XML / Web Services team first, as we will provide you another URL for this purpose. This is to prevent impact to our production systems.
- 3) When using Availability only URL, please add <priceRequest version="3.0">, as in example below:

Sample Query: <?xml version="1.0" encoding="UTF-8" ?>

<priceRequest version="3.0">

<customerNo>YOUR ACCOUNT NUMBER</customerNo>

<userName>YOUR ID</userName>

<password>YOUR PASSWORD</password>

<skuList>

<synnexSKU>439866</synnexSKU>
lineNumber>1

</skuList>
</priceRequest>

2. HTTPS & HTML

HTTPS, HTML, DTD, and XML Schema are available from the SYNNEX XML Test site: https://testec.synnex.com/SynnexXML/

If you have any questions

Technical questions (e.g. how to send, or programming questions), Business Process questions, Production Issues or Feedback, please contact

US and Canada -

XML Support Group, xmlgroup@synnex.com

For IP Registrations please send an email requesting the new IP registration along with your Synnex Customer# to

For the US: Helpdesk US, helpdeskus@synnex.com

For Canada: Helpdesk CA, helpdeskcanada@synnex.com

A member of our global XML Team or Global Helpdesk Team will gladly assist you and provide a prompt response

Appendix A - SYNNEX Warehouses List

SYNNEX (USA) Warehouse List

LOCATION ID	NAME	CITY	STATE	ZIP
16	16	Miami	FL	33172
3	3	Fremont	CA	94539
9	9	Chantilly	VA	20151
5	5	Richardson	TX	75081
6	6	Glendale Heights	IL	60139
7	7	Olive Branch	MS	38654
8	8	Keasby	NJ	08832
10	10	Beaverton	OR	97008
4	4	Norcross	GA	30071
12	12	Ontario	CA	91761
14	14	Columbus	ОН	43123
79	79	Olive Branch	MS	38654 *
89	89	Keasby	NJ	08832 *
129	129	Ontario	CA	91761 *
149	149	Columbus	ОН	43123 *

^{*}Please Note: New Warehouses added for Consumer Gaming Products & Accessories

SYNNEX (CANADA) Warehouse List

LOCATION ID	NAME	CITY	STATE	ZIP
US (Joint US/Canada)) US	Various	Various	Various **
26	26	Halifax	N.S.	B3S 1B3
29	29	Guelph	Ontario	N1H 6J3
31	31	Calgary	Alberta	T2C 4X3
32 (Closed, Use Lo	ocation 60)	Richmond	B.C.	V6V 2L5
<mark>57</mark>	57	Markham	Ontario	L3R 0Z9*
<mark>60</mark>	60	Richmond	B.C.	V6V 1P6*

^{*}New Warehouse Location

Updated 5/31/2013

^{**}Please Note: New Warehouse Designation listed is for US Warehouses participating in Joint US/Canada Warehouse program. Quantity listed represents total on-hand for all participating warehouses. Please contact your SYNNEX sales rep for additional information.

Appendix B - SYNNEX XML Response Time

Listed below is the average response time collected by our recent production measurement:

1 /sku, request availability : 0.5 Second

5 skus, request availability : 1 Second

1 sku, request price and availability : 1 Second

5 skus, request price and availability : 1.5 Second

Note:

- 1. The time is measured from the time the XML request leaves the door of customer to the time XML response reaches the customer.
- 2. In peak hours, the response time may be takes longer
- We continue to monitor our response time for service quality assurance, if you experience a response time that is significantly slower than what we have stated, please don't hesitate to contact us.

Appendix C - How to use SOAP with SYNNEX

What is SOAP?

SOAP (Simple Object Access Protocol) is a protocol for exchanging XML-based messages over computer networks, normally using HTTP/HTTPS.

SOAP is the implement of Web Service (WS); the SOAP message is encrypted by using WS-Security function.

SOAP Message Sample

SYNNEX SOAP services list

At present, SYNNEX provides following SOAP services. You can get related WSDL from SYNNEX XML web site.

- Price Availability WSDL (For all customers)
- Freight Quote <u>WSDL</u> (For all customers)
- Return Merchandise Authorization (For special customers)

How to test SOAP with SYNNEX

You can use 3 party tools to test SOAP with SYNNEX or build your own SOAP client program.


