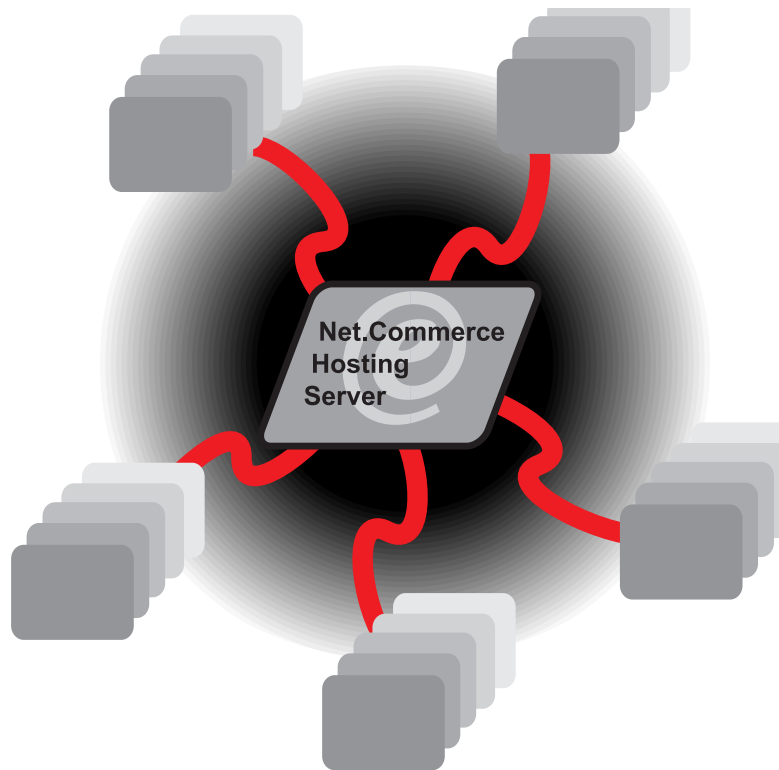


***IBM Net.Commerce Hosting Server:  
NCHS V3.1.2 Plug-In Enhancement***



**Abstract**

In September of 1999, IBM is releasing a Plug-In enhancement to the Net.Commerce Hosting Server V3.1.2. This document describes the features and benefits delivered by the Plug-In along with information on how to access the Plug-In for installation on the Net.Commerce Hosting Server V3.1.2.



## Contents

<b>Contents</b> .....	2
<b>About this document</b> .....	3
<i>Some terminology</i> .....	3
<i>How to find out more about Net.Commerce</i> .....	3
<b>Net.Commerce Hosting Server Overview</b> .....	4
<b>Net.Commerce Hosting Server V3.2.1 Plug-In Enhancement</b> .....	5
Enhancement Drivers .....	5
Enhancement functions .....	6
<i>Snap-On e-commerce</i> .....	6
<i>Enhanced Catalog Management</i> .....	8
<i>Merchandising</i> .....	9
<i>Improved Support for Custom Designed HTML Pages</i> .....	11
<i>Open Payment Interface</i> .....	11
<i>Merchant Tool Enhancements</i> .....	12
<b>Getting and installing the NCHS V3.1.2 Plug-In</b> .....	13
<i>Plug-In Requirements</i> .....	13
<i>How to get the Plug-In</i> .....	13
<b>NCHS Futures</b> .....	14
Statement of Direction .....	14
<i>What's coming next</i> .....	14

## About this document

This document provides a description of the features and benefits delivered by the Net.Commerce Hosting Server V3.1.2 Plug-In Enhancement. It includes information on how to access the Plug-In for installation on the Net.Commerce Hosting Server.

## Some terminology

The following terms are used throughout this document:

CSP - Commerce Service Provider

NCHS - Net.Commerce Hosting Server

Plug-In - Refers to the enhancement code as packaged for delivery

PSP - Payment Service Provider

FI - Financial Institution

## How to find out more about Net.Commerce

To find more information about the Net.Commerce family of offerings, check out our Web site at:

<http://www.ibm.com/net.commerce>

To find out about other IBM e-business products and services, visit:

<http://www.ibm.com/e-business>

For IBM Internal, to find more information the Net.Commerce Hosting Server, check out our Web site at:

<http://zoltan.ibm.com>

## **Net.Commerce Hosting Server Overview**

The IBM Net.Commerce Hosting Server (NCHS) for Windows NT, AIX, and Sun Solaris is an integrated, robust, software package that enables Internet Service Providers and other hosting providers to set up and operate, cost-effective, low-maintenance, e-commerce hosting services for businesses that want to sell their goods and services on the Web.

It enables service providers to 'lease' hosted Web storefronts to businesses who are not ready or able to make in-house IT investments in e-commerce. Storefront rental is an ideal option for businesses who lack the expertise or resources to develop, operate, and maintain an e-commerce site or any business just wanting to explore e-commerce as a new distribution channel.

The IBM Net.Commerce Hosting Server enables Commerce Service Providers (CSPs) to create branded site hosting and rental services for very large numbers of customers in a shared commerce server environment. Customers of these services can use browser-based tools to create and operate stores in this shared environment.

Built on the robust, multi-site e-commerce platform of Net.Commerce, Version 3, the IBM Net.Commerce Hosting Server extends Net.Commerce with additional features tools, templates, and documentation to support the setup and operation of a self-serve, Web storefront rental service.

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## Net.Commerce Hosting Server V3.2.1 Plug-In Enhancement

Commerce Service Providers compete in a market typified by intense competition and rapid innovation. The Internet marketplace expects an ongoing cycle of increased functionality at the same or lower price points. IBM's objective is to maintain and extend the leadership of its Commerce Service Provider Partners in the market for hosted e-commerce services. To this end IBM plans to deliver major functional enhancements to the Net.Commerce Hosting Server between full product releases. Product enhancements will deliver on the key business challenges and opportunities uncovered through market research and close collaboration with IBM's CSP partners.

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### Enhancement Drivers

The content of this enhancement is driven by emerging market needs and opportunities uncovered through IBM's close collaboration with early adopter CSPs and Merchants. These needs and opportunities are as follows:

**Maximize Financial Opportunity for the CSP** - CSPs want their commerce hosting platform to maximize their financial opportunity by cost effectively enabling the widest array of e-commerce solutions to the largest number of merchants possible.

**Establish Alliances** - ISPs, CSPs and PSPs are looking for ways to work together to address the market needs for hosted e-commerce solutions. They require an e-commerce software platform that facilitates the creation of creative partnerships between all industry players.

**Enable the Financial Institution to offer Internet payment services** - Credit card companies, banks, and other financial institutions see e-commerce as a natural extension to their existing merchant services. Because their core competencies and market image surround transaction processing, financial institutions wish to lead their entry into this market by offering payment processing solutions for existing Web sites. Financial institutions will follow with additional e-commerce services.

**Protect and Enhance Merchant Investments** - Many merchants already have a Web site. Marketing programs driving traffic to their sites are already in place. Merchants want to leverage these investments by quickly and easily adding e-commerce functions to their existing Web sites.

**Supporting Larger Merchants** - Larger merchants view NCHS as an attractive, powerful, e-commerce solution. In addition to requiring custom designed HTML pages, these merchants want a simple method of getting large product catalogs into the NCHS database. Once the catalog is in the database special tools are required to manage the catalog.

**Merchandising** - Once merchants setup their e-commerce stores, they begin to look for innovative ways to enhance the effectiveness of their stores ability to sell products. Merchandising is an important aspect to the merchants e-commerce solutions.

**Support for HTML Design Tools** - Merchants and CSPs want the flexibility to create a customized look and feel for static pages hosted by NCHS. Some may hard code HTML or use one of many popular HTML creation tools.

**Custom Payment Solutions** - CSPs and Payment Service Providers (PSPs), each having a unique set of skills, market image and customer base, recognize the potential of their partnership. CSPs are steeped in Internet access, Web site design and site hosting resources. The PSP offers financial transaction processing expertise and corresponding relationships. In addition to these critical factors that make up the e-commerce solution, there is an additional opportunity to market to their collective customer base. Together, the CSP and the PSP are uniquely positioned

to comarket e-commerce solutions. They require a software platform that enables their partnership.

## Enhancement functions

Several powerful functions are delivered in the NCHS V3.1.2 Plug-In enhancement, each providing benefits to the CSP and merchant.

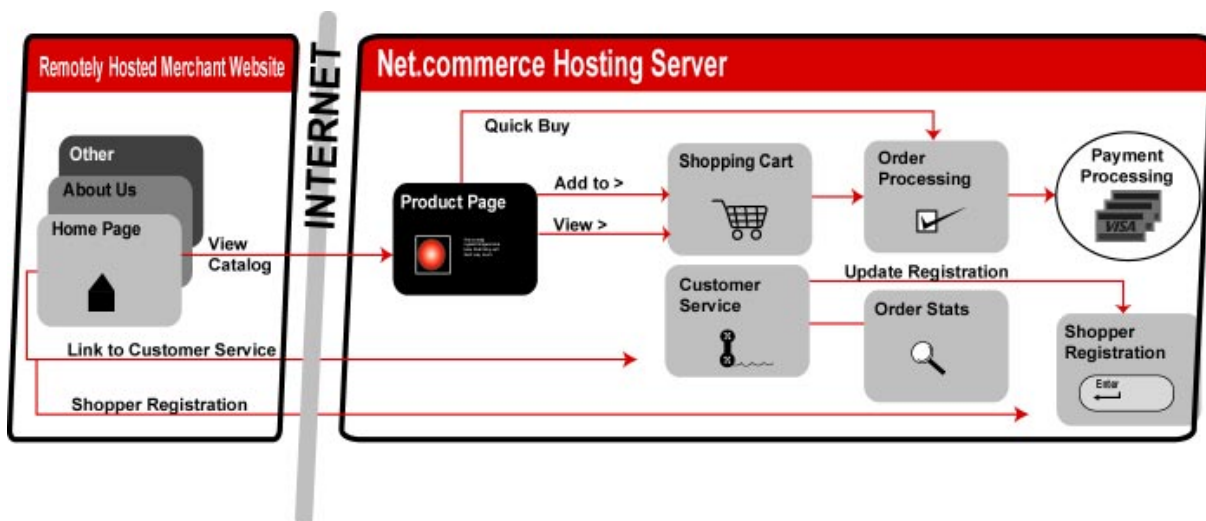
## Snap-On e-commerce

Snap-On e-commerce, a major feature of the Plug-In, is a powerful solution bringing significant value to the CSP and the merchant. With Snap-On e-commerce, the CSP can offer e-commerce services to a much larger range and volume of merchants than ever before. Using the browser based merchant tools, the merchant can quickly and easily add e-commerce functions to existing Web sties, regardless of where the site is hosted. Merchants can leverage their current Web site investment by “snapping” on shopping cart, order processing and credit card transaction capabilities.

**Using Snap-On e-commerce to commerce enable existing Web sites.** The manner in which product data is displayed on the merchants non NCHS hosted Web site will dictate the commerce enabling approach most attractive to the merchant. If a merchant has a Web site but does not have a catalog or pages displaying detailed product information the merchant may add all of the NCHS e-commerce functions to their site. These functions include:

- A Searchable Navigable Catalog
- Shopping Cart
- Order Processing
- Credit Card Transactions
- Customer Service Functions

The graphical representation below depicts how Snap-On e-commerce is used in this scenario.

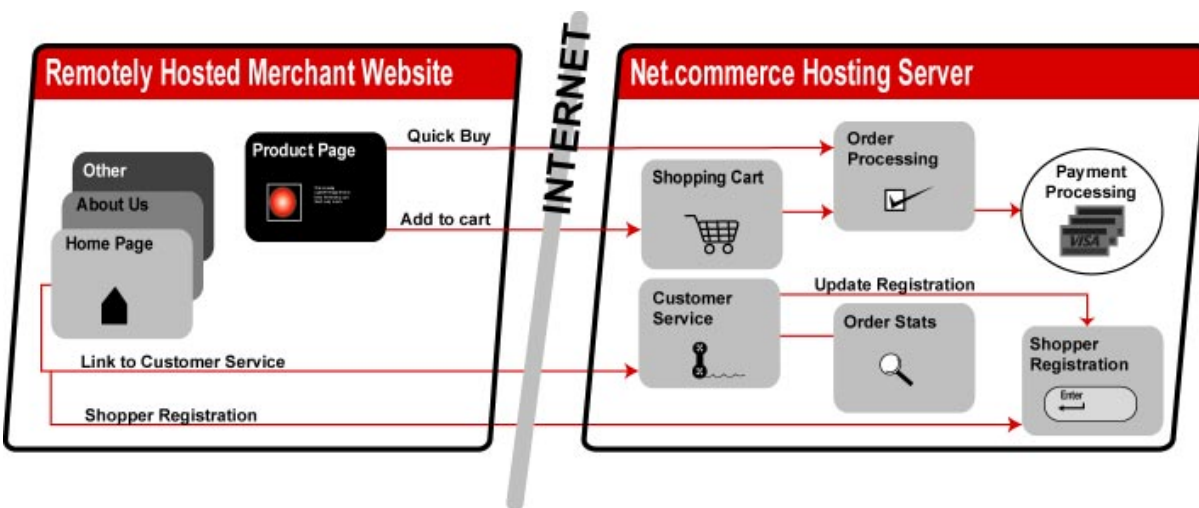


As represented in the above diagram, NCHS functions are seamlessly integrated with the merchants remotely hosted site. The look of the NCHS pages are easily modified by the merchant tools to match the look of the merchants existing site design.

Merchants who have product pages on their non NCHS hosted sites will, in most cases, choose not to add the NCHS catalog and link their product pages directly to the NCHS shopping cart. In this scenario merchants will use the browser based merchant tools to add the following functions to their non NCHS hosted Web site:

- Shopping Cart
- Order Processing
- Credit Card Transactions
- Customer Service Functions

The graphic below depicts this scenario.



#### Value for the Commerce Service Provider:

- **Increase Revenue Opportunity.** NCHS already supports a wide range of e-commerce solutions meeting various market price points. Solutions range from the merchant enabled, easy to build and manage store, to sites supporting custom HTML static pages in front of the NCHS catalog, shopping cart and checkout functions. The ability to add e-commerce capabilities to remotely hosted Web sites dramatically increases the number of e-commerce hosting requirements the CSP can support. As a result, the CSP's financial opportunity increases. More solutions meeting more e-commerce requirements means a greater revenue opportunity for the CSP. Because the merchant can easily commerce enable their remotely hosted site using the browser based merchant tools, the CSP enjoys a particularly profitable revenue stream as Snap-On e-commerce, like the NCHS full store, requires little or no CSP staff involvement for the merchant to set up and operate. Additionally, with tens and thousands of Web pages hosted remotely, the CSP is not required to invest in the technology to host those Web pages. The additional revenues from Snap-On e-commerce customers are associated with an even lower cost structure and higher profits than the already effective NCHS full stores.



- ***The Financial Institution as a CSP.*** Credit card companies, banks, and other financial services providers see e-commerce as a logical extension to their existing merchant services. Uniquely positioned with extensive financial transaction services offerings, along with an existing merchant customer base, they are an ideal facilitator of e-commerce. With core competencies and a market image associated with transaction processing, the Plug-In enhancement to NCHS allows the financial institution to enter the market for hosted e-commerce services with a strategy that directly leverages their strengths and market perceptions. Snap-On e-commerce enables the financial institution to lead with a transactional based commerce enabling offering and follow with the rich store creation and hosting aspects of NCHS. Because the store creation and management processes in NCHS are performed by the merchant via the browser based tools, with little or no help required from the CSP, the financial institution is not required to invest in Web site creation and management staff. NCHS does it all.
- ***Establish Powerful Marketing Alliances*** - Telephone companies, financial institutions and Internet service providers can establish marketing alliances with networks of other providers to dramatically increase their market reach. Providers in the network benefit by not having to make the investment in e-commerce hosting and payment technologies, yet can market their uniquely branded e-commerce solutions to the merchant.

**Value to the Merchant:**

***Protecting Merchant Investments.*** Marketing studies show that 30% - 45% of all very small, small and medium sized businesses have already invested in creating a Web site. Along with the expense and time allocated to site creation, there is often a considerable marketing effort in place to drive traffic to those sites. Investments include print advertising, printed collateral and link placement on various Web sites. These merchants want to utilize e-commerce solutions that protect their Web site creation and promotion investments. By commerce enabling existing Web sites Snap-On e-commerce protects the merchants investments in these areas.

## Enhanced Catalog Management

Larger merchants view NCHS as an attractive, powerful, e-commerce solution. Already delivered in NCHS, the Order Management Tool is designed to handle order volumes driven by larger merchants. By giving the merchant a single browser based interface for order tracking, order processing and order exception management merchants can manage orders through the easy to use NCHS tools with no requirement for external processes. As the stores volume grows key store operational tasks can be assigned to various individuals in the merchants organization. The store manager can assign granular levels of password protected access to store management functions such as catalog maintenance, order processing and site administration.

As the catalog size grows additional tools become ever more critical. By delivering a mass data import utility, improved catalog editor performance and a Catalog Image Manager, this Plug-In enhancement extends NCHS's ability to support large catalogs. Using the Mass Import Utility, CSP's can upload catalog data in comma delimited format, on behalf of the merchant. After initial upload, the merchant uses the performance enhanced browser based catalog editor in the merchant tool kit to update and manage the catalog on an ongoing basis. The Catalog Image Manager helps the merchant file, sort and access catalog images. Now larger merchants can realize the benefits provided by the Net.Commerce Hosting Server.

**Value to the Commerce Service Provider:**

- ***Increased Revenue Opportunity.*** Supporting larger catalogs expands the number of merchant opportunities NCHS will support. As an added benefit, prevalent pricing models

today are based on the number of products in the merchants catalog. As the number of catalog items increases, CSPs charge additional fees to support the larger data storage requirements. Meeting the needs of a larger potential customer base and support for key industry business models equates to a larger revenue opportunity for the CSP.

**Value to the Merchant:**

**Reduced Store Creation Time.** As the number of products a merchant offers in their on-line store increases, building out and managing the electronic catalog using a browser based catalog editor becomes a time consuming proposition. Quickly uploading catalog data in comma delimited format dramatically shortens the store creation process. After initial upload, the merchant uses the performance enhanced browser based catalog editor in the merchant tool kit to update and manage the catalog on an ongoing basis. The Catalog Image Manager helps the merchant file, sort and access catalog images. These data management tools lower the overall cost of the merchants e-commerce implementation.

## Merchandising

Snap-On e-commerce makes new and innovative merchandising techniques possible. In the same way Snap-On e-commerce is used to create links to the NCHS shopping cart and product pages - buy buttons, banner ads, Web pages and e-mail's can be commerce enabled. With this Plug-In enhancement, NCHS presents the merchant with a multitude of powerful merchandising strategies.

**Commerce Enabling NCHS Broadcast e-mail.** Already a powerful merchandising tool, the broadcast e-mail function in NCHS allows the merchant to send targeted e-mail's to shoppers who have purchased products in their store. Snap-On e-commerce makes these e-mail's even more effective. Links that move shoppers from a buy button to the shopping cart are simply special URLs. These URL links can be included in the text of promotional e-mails, such that when clicked, or pasted into a browser, the shopper is forwarded to the shopping cart in the merchants NCHS store. Here is a sample promotional e-mail:

Dear Heather's Snowboards customer,

The following winter specials are offered to the valued customers of Heather's Snowboards. Prices are valid for two weeks from the receipt of this letter.

Burton Super Model 178 all mountain snowboard \$299.00

<http://heatherssnowboards/burtonsupermodel>

Smith goggles \$45.00

<http://heatherssnowboards/smithgoggles>

Act now. Supplies are limited.

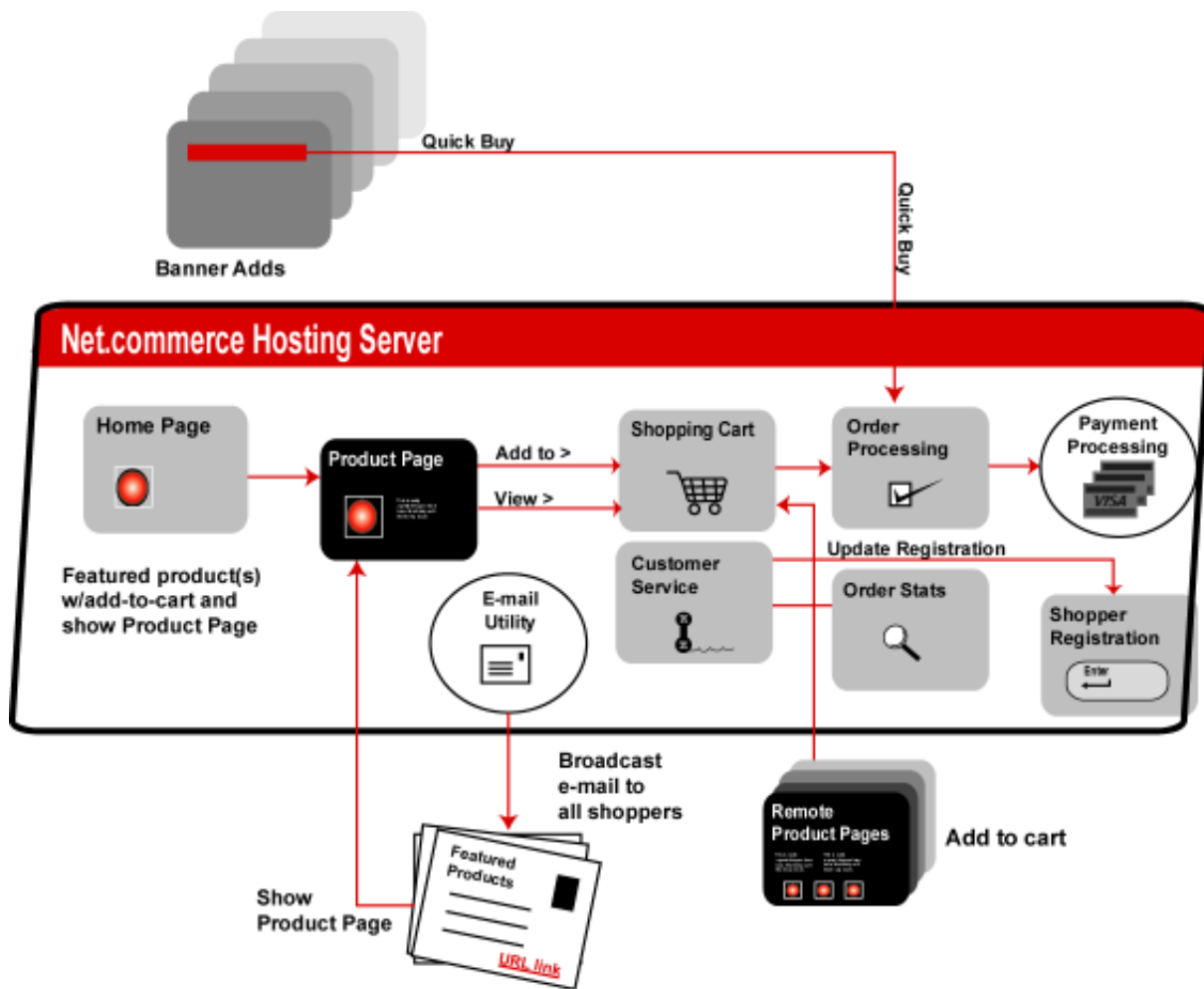
Thank you for shopping with Heather's Snowboards!

**Placing Commerce Enabled Ads and Graphics all over the Internet.** NCHS expands the merchants ability to harness the power of the Internet to promote their products and services. Using the capabilities of Snap-On e-commerce, commerce enabled graphics, banner ads or product pages can be placed all over the Internet. Shoppers surfing on sites external to the merchants NCHS store who click on these promotions are forwarded to any part of the merchants NCHS e-commerce store the merchant chooses to link them to. Revenue sharing agreements are a common basis for these traffic sharing strategies. To help merchants manage these

relationships, the NCHS reporting module tracks click trails from referring Web sites along with the associated revenues generated from forwarded shoppers.

**Quick Buy** - A quick buy button, or link, when pressed, forwards the shopper directly to the checkout process. Shoppers who select quick buy want a quick and easy way to purchase a product of interest. They want to take a single item right to the checkout counter. As with any link generated by Snapp-On e-commerce, merchants may place Quick Buy links anywhere internally or externally to NHCS.

The graphic below depicts using NCHS to merchandise products in these ways.



**Value to the Commerce Service Provider:**

- **Increased Revenue Opportunity.** The Internet as new distribution channel and potential source of revenues is the number one reason merchants are implementing e-commerce stores today. CSPs offering store solutions enabling merchants to more effectively promote their products and services are better positioned to grow their hosted e-commerce business. This NCHS Plug-In enhancement enables the CSP to offer merchant enabled e-commerce stores with industry leading merchandising capabilities.

**Value to the Merchant:**

- **Sell more stuff.** Merchandising and promotional capabilities are key aspects to a successful e-commerce solution. With this Plug-In enhancement, merchants have additional ways to drive traffic to their electronic storefronts. More traffic means more shoppers and more shoppers means more stuff sold.

## Improved Support for Custom Designed HTML Pages

While NCHS supports custom designed HTML pages today, the improved URL link generator in Snap-On e-commerce makes it much easier to incorporate custom HTML pages in NCHS. HTML can be hard coded or an HTML creation tool can be used. Once complete, links from the custom static pages to the appropriate aspects of the NCHS store can easily be created using the browser based link generator.

**Value to the Commerce Service Provider:**

- **Increased Revenue Opportunity.** Support for custom designed HTML static pages increases the range of e-commerce store solutions CSP's can offer on their NCHS platform. On the higher end of the offering the ability to support custom HTML static pages is a revenue sweet spot for many CSP's. Because stores can be created quickly and easily in NCHS, CSPs offering HTML design services can create a sophisticated e-commerce store at a lower cost than previously possible. Shorter custom store production cycles along with a wider range of store solutions positions the CSP for higher profitability.

**Value to the Merchant:**

- **More Solutions Available.** Merchants who seek the finished look of custom designed HTML static pages can now more easily reach this objective. Whether the merchant has the technical ability to build and upload HTML pages themselves or they contract the services of the CSP, the option is there. Additionally, merchants who start out with a simple store, know they can easily and cost effectively enhance the look and feel of their store within NCHS as their store becomes more successful.

## Open Payment Interface

Now, using XML, CSPs, BPs, and ISVs can more easily extend NCHS V3.1.2 to support additional payment solutions. An open, architected payment Setup Wizard and Order Processing tool allows the CSP to quickly integrate NCHS with the PSP partner of their choosing.

An example of a custom payment solution is offering the merchant the ability to apply for a merchant account, on-line, during the store creation process. All merchants who wish to process credit cards over the internet are required to establish a merchant account with the PSP. Usually this entails the merchant calling the PSP on the telephone and faxing paperwork back and fourth. Some additional follow-up is usually required to get the merchant ID and terminal ID from the PSP and enter that into the appropriate NCHS Payment Wizard fields. Using the open Payment Interface, a custom solution can be integrated with NCHS such that the necessary application forms are filled out by the merchant on-line, during the store creation process. The completed application is forwarded to the PSP automatically by NCHS for their review. Upon approval the proper ID information is then sent via e-mail to the merchant directly or entered into the NCHS system by the PSP.

Other custom payment solutions include offering additional credit cards and payment methods.

**Value to the Commerce Service Provider:**

- **Establish Powerful Partnerships** - As partners, the CSP and PSP are uniquely positioned to provide e-commerce solutions. CSPs are steeped in Internet access, Web site design and site hosting resources and abilities. The PSP offers financial transaction processing expertise and the corresponding relationships. Additionally, both the CSP and the PSP have a customer base that, in many cases, are already investigating e-commerce solutions. These skills, technologies and relationships together make a strong offering in the market for hosted e-commerce solutions. With its open payment framework NCHS facilitates these relationships by allowing the CSP and PSP to integrate their respective technologies and services in one single, seamless, offering.
- **The PSP advantage** - E-commerce is a natural extension to the brick and mortar based merchant services provided by Credit card companies, banks, and other financial institutions. Integrating their existing payment processing offerings with NCHS through the open payment framework enables the PSP to expand their current merchant services to include full e-commerce services from site creation, hosting through payment transaction processing.

**Value to the Merchant:**

- **Ease of Operations** - Merchants want a single point of contact for all of their e-commerce solutions. Tightly integrated offerings that include everything the merchant needs to sell products and services on the Internet reduce the time and complexity associated with launching an e-commerce store. If problems arise the merchant feels comfortable knowing there is one team to go to help put the fire out. These factors contribute to lowering the merchants cost of business.

## Merchant Tool Enhancements

The following enhancements were made to the Merchant Tool:

**Tax and Shipping set up** - Tax jurisdictions and shipping methods created by the merchant are presented in the catalog editor in a data driven drop down box. This makes selecting a products tax and shipping settings as easy as a mouse click.

**Link bar editor** - The Link Bar Editor allows the merchant to customize the Link Bar that resides on all aspects of NCHS other than the static pages. The URL of a custom designed HTML home page or remotely hosted home page can be entered here such that the home button on all static NCHS pages links to the proper home page.

**Useful Links Repository** - Remotely hosted sites and custom designed static pages will need to be linked to the catalog, product pages, customer service and checkout pages of NCHS. The link repository maintains a listing of the URL links to these NCHS pages. Merchants can cut and paste these links into their remotely hosted or custom designed HTML pages.

## Getting and installing the NCHS V3.1.2 Plug-In

### Plug-In Requirements

To receive and use the download you must have NCHS V3.1.2 installed and running. The Plug-In only works on NCHS V3.1.2 so if you are on NCHS 3.1.1, you'll need upgrade your installation. The Plug-In is only available in English. Do not install it on a non English version of NCHS. A translated version of this functionality will be delivered with the next NCHS full product release.

### How to get the Plug-In

A Plug-In download package is available on the NCHS community Web site at:

<http://www.software.ibm.com/commerce/net.commerce/community/hosthood/>

When you arrive to the site click on the link for the downloads page. You are required to register to get the download, so go ahead and do that here. Its quick and easy. Go to the downloads page and find the NCHS V3.1.2 Plug-In Enhancement. Everything you'll need to get the Plug-In installed on your system is provided including:

- Instructions
- Plug-In code
- Migration scripts for your existing NCHS stores
- Updated merchant on-line help
- Update CSP help in PDF format

Download the file and follow the directions.

## NCHS Futures

The content of the first version of NCHS (V3.1.2) was driven by the key needs and critical success factors of early adopter CSPs. They needed quick time to market with a basic, pre configured solution that supported complete merchant self-provisioning. Their key business challenges were customer retention and attraction, along with cost-effective operations and improved ROI. These continue to be needs of CSPs today, but new challenges are emerging:

- CSPs want to cost-effectively expand their reach to the maximum number of merchants regardless of the merchant's unique requirements or level of sophistication.
- Like other ISP services, commerce services will begin to "commoditize", so CSPs need to be able to quickly extend or create new value-added services.
- Even SMB customers' wants and expectations are becoming more sophisticated and varied, and they like the promise of an evolving "lifecycle" approach.
- Many CSPs who either do not see themselves as general-purpose Web hosts, or those who started out that way now want specialize or differentiate their commerce services.

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## Statement of Direction

While the enhancements to NCHS outlined in this document provide significant value to the CSP and merchant, rapid innovation and market dynamics typified by the Internet space will continue. Our product plans will attempt to address these challenges and innovations both full product releases and interim add-on or plug-in deliverables available on the Web. The focus of future releases of NCHS will include:

- Ultimate flexibility through openness, XML support and expanded options (customizability, extensibility, configurability)
- Merchant enablement across the e-commerce lifecycle (range of store/catalog creation and enablement options)
- Transaction processing (richer, more flexible payment and order processing)
- Prepackaged e-commerce functionality (additional store models, templates and merchandising and personalization features)

## What's coming next

Net.Commerce Hosting Server Version 3.2 will be the follow-on to NCHS V3.1.2. Like its predecessor, NCHS V3.2 will be a complete packaged solution that Web hosts can use to build and operate shared e-commerce services for small and medium businesses. Building on the pre-configured, merchant-provisioned model of NCHS V3.1.2, NCHS V3.2 will provide additional features, tools, and capabilities to meet the evolving needs and business models of our target market. The NCHS V3.2 product offering is targeted for a full release in first quarter 2000. Highlights will include:

**Service levels.** Each CSP customer can use NCHS V3.2 to deliver a variety of service models enabling them to reach the maximum of potential merchants. Chief among the scenarios being fill-in-the blank, standard storefront, professional storefront, and remote site enablement.

**Store design and creation options.** In addition to revamping, improving, and enhancing the self-provisioned page designer of NHCS, V3.2 will provide additional enablement options that support the range of opportunities among merchants from the very low-end to those who want to use professional services. A simple store creation wizard along with a CSP-extensible set of themes, layouts, and templates will be provided for do-it-yourself store creation. For more advanced page design, NCHS V3.2 will support the use of virtually any page creation tool.

**Catalog creation and management.** A simple catalog editor will be provided for the low-end, fill-in-the-blank stores, and a data import tool to allow merchants to upload and import their own data from a delimited file. In addition, Catalog Architect or a custom import/input tool can also be used.

**Payment and order processing.** CSPs, BPs, and ISVs can extend NCHS V3.2 to support additional payment solutions. An open, architected interface will be provided to allow additional Payment Server cassettes to be developed and used within NCHS. In addition, the merchant-provisioned payment wizard, payment capture, and order management interfaces will be opened to support any new payment solution integrated with NCHS.

**Merchandising.** The self-provisioned merchant tools will allow merchants to add e-commerce functionality to their stores, such as: limited time price overrides (discounts, sales), featured item lists or pages, and banner ads. Mall administrators can add site-wide features and banner ads.

**Commerce lifecycle support.** To better deliver on the promise of NCHS and Net.Commerce as “one platform for the life of your e-commerce customer”, NCHS V3.2 will support the migration of merchants as their needs evolve. They can migrate seamlessly between service levels (remote store to basic store to standard store, for example), and ultimately they can be moved to non-NCHS installations to take complete advantage of Net.Commerce.



## To Learn More

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