



GiftWrap 4.0
Hosting and Security FAQ

The information presented here is current as of the date of this document, and may change from time-to-time, in order to reflect PG Calc's ongoing efforts to maintain the highest levels of system and data security possible.

TABLE OF CONTENTS

1	Introduction.....	1
2	What hosting options are available for <i>GiftWrap 4.0</i> ?	1
3	What is the <i>GiftWrap 4.0</i> server configuration?	1
4	Is The <i>GiftWrap 4.0</i> Hosting Environment Secure?	3
5	Is My Data Secure on the <i>GiftWrap 4.0</i> Platform?	4
6	What Kind of Continuity of Operation Measures Are In Place?.....	6
7	What Disaster Recovery Plans Are in Place for <i>GiftWrap 4.0</i> ?	7
7.1	Disaster Recovery	7
7.2	Managed Backup	7
8	Is My Data Secure As It Travels Over the Internet?	8
9	Can I get a copy of my data?.....	8
10	What is the <i>GiftWrap 4.0</i> Update Process?	9
11	What is the <i>GiftWrap 4.0</i> Maintenance Process?	9
12	What Kind of uptime can i expect with the <i>GiftWrap 4.0</i> hosted application?	10
13	What hosting options are available?.....	10
14	Hosting Option Matrix.....	12

1 INTRODUCTION

GiftWrap 4.0, PG Calc's industry-leading planned gift administration system, provides you with the tools, calculations, reporting and data management necessary for successful planned gift program administration. *GiftWrap* is available to you as a service, or as an enterprise application, hosted on your internal network. This document focuses on the delivery of *GiftWrap* as a service, and contains the most frequently asked questions regarding issues such as data and application hosting, security, backup and restoral, and disaster recovery.

2 WHAT HOSTING OPTIONS ARE AVAILABLE FOR GIFTWRAP 4.0?

GiftWrap 4.0 is available as a hosted application, or as an enterprise application. This document will address the hosted application option.

The hosted version of *GiftWrap 4.0* is available to any authorized user with a browser and an Internet connection. PG Calc provides hosting services through our hosting vendor, Rackspace. That means that, in conjunction with Rackspace, PG Calc provides the servers, network infrastructure and bandwidth, security and operations necessary to deliver *GiftWrap* application services. As a hosted *GiftWrap* customer, you don't have to worry about procuring additional servers, maintaining the application database or installing updates. PG Calc will provide these services and more with the *GiftWrap* hosted application.

PG Calc provides additional hosting options for organizations that have requirements that extend beyond the characteristics of our standard hosting option. See section 11 of this document for hosting option details.

3 WHAT IS THE GIFTWRAP 4.0 SERVER CONFIGURATION?

PG Calc makes *GiftWrap 4.0* available to you as a Web-based application. This means authorized users can access *GiftWrap 4.0* using a Web browser anytime and anywhere, with Internet access. *GiftWrap 4.0* is a three tier application, with the Web browser functioning as the front-end client, and with an application server tier and a database tier. The *GiftWrap* application is hosted on a dedicated application server, while the database is hosted on a dedicated database server. The *GiftWrap* application is built on the Microsoft stack, as follows:

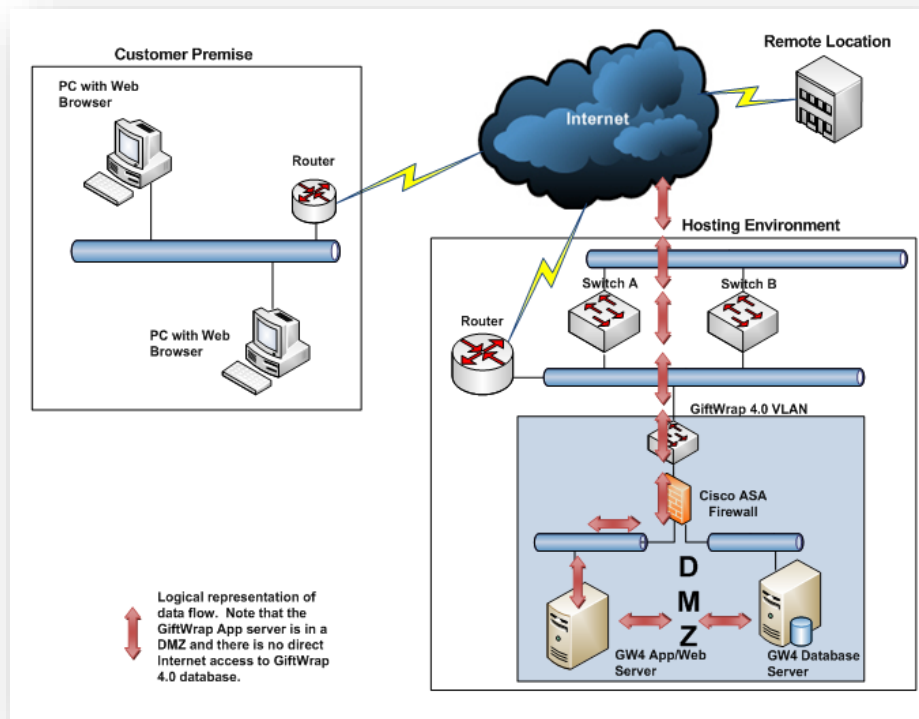
- Windows Server 2012 R2
- Microsoft .Net Framework 4.6
- ASP.NET 3.5
- C# 3.0 (code that is incorporated into *GiftWrap* files)
- jQuery 1.9 (code that is incorporated into *GiftWrap* files)
- ASP.NET Ajax and Ajax Toolkit 4.1 (code that is incorporated into *GiftWrap* files)
- IIS 8.5
- Microsoft SQL Server 2008 Enterprise SP3, 2008 R2, 2102, 2014, or 2106

The PG Calc *GiftWrap* 4.0 hosted platform is configured as follows:

Application Server Configuration	Database Server Configuration
<ul style="list-style-type: none"> ▪ Dual Quad Core Processors ▪ 32 GB RAM ▪ 830 GB RAID 10 Storage ▪ MS Windows Server 2012 – 64 bit ▪ MS IIS 8.5 	<ul style="list-style-type: none"> ▪ Dual Core Processor ▪ 8 GB RAM ▪ 219 GB RAID 5 Storage ▪ MS Windows Server 2012, Server 2012 R2, or Server 2106 – 64 bit ▪ MS SQL Server 2008, 2008 R2, 2012, 2014, or 2016

Notes:

1. The *GiftWrap* 4.0 database can operate successfully in a database server environment running Windows Server 2003 as its operating system and SQL Server 2005 or 2008 (32 or 64 bit) as its database management system.
2. Note that SQL Server 2005 does not support Transparent Database Encryption (TDE), and therefore does not offer the same comprehensive level of data security as SQL Server 2008.



4 IS THE *GIFTWRAP* 4.0 HOSTING ENVIRONMENT SECURE?

PG Calc makes *GiftWrap* 4.0 available to you as a Web-based application. This means you can access *GiftWrap* 4.0 using a Web browser anytime and anywhere, as long as you have Internet access. In order to provide this on-demand access, PG Calc has partnered with Rackspace, the world's leader in hosting and cloud computing, providing PG Calc and its clients with best-in-class, SSAE16 SOC Type II audited, state-of-the-art hosting infrastructure services, including industry-leading security services. The *GiftWrap* hosting environment includes physical security, network security, infrastructure and application environment operational security, and virus protection, as described below:

- Physical Security
 - Data center access is limited to Rackspace data center technicians
 - Biometric scanning is used for controlled data center access
 - Security camera monitor at all data center locations
 - 24x7 onsite staff provides additional protection against unauthorized entry
 - Data center facilities are unmarked to help maintain a low profile
 - Physical security measures are audited by an independent firm
- Network and System Security
 - Systems are installed using hardened, patched OS
 - System patching is configured to provide ongoing protection from exploits
 - Dedicated Pix firewall and VPN services are used to help block unauthorized system access
 - Data protection is provided with managed data and application backup
 - Distributed Denial of Service (DDoS) mitigation services at the network perimeter
- Infrastructure Operational Security
 - ISO17799-based policies and procedures are implemented and regularly reviewed as part of an ongoing SSAE-16 SOC-1 audit process
 - All data center employees are trained on documented information security and privacy procedures
 - Access to confidential information by data center staff is restricted to authorized personnel only, according to documented processes – Note that *GiftWrap* customer data is fully encrypted and not accessible by data center personnel
 - Systems access is logged and tracked for auditing purposes
 - Secure document-destruction policies are followed by data center staff for all sensitive information
 - Fully documented change-management procedures are in place
 - Independently audited disaster recovery and business continuity plans are in place for Rackspace headquarters and support services
- Application Environment Operational Security
 - Best practices are used by data center staff in the random generation of system passwords
 - All system passwords are encrypted during transmission and while in storage

- Secure media handling and destruction procedures are used by data center staff for all customer data
- Data center support-ticket history is available for review
- Anti-Virus Protection by Sophos
 - Provides proactive, sustained protection against viruses, worms, Trojans, spyware and other malware in one solution
 - Uses Behavioral Genotype Protection™ to provide zero-day protection by proactively identifying malicious code on file servers and deleting it before it executes
 - Provides 24x7x365 protection by SophosLabs, Sophos's global network threat analysis centers
 - Can be automatically updated as frequently as every five minutes or on demand
 - Includes a quarantine manager that allows PG Calc to delete or disinfect infected files

5 IS MY DATA SECURE ON THE *GIFTWRAP* 4.0 PLATFORM?

The short answer is an unqualified YES. *GiftWrap* 4.0 has been designed with an inherently secure architecture and offers a multi-level approach to ensuring data security.

First, the application is built in layers, the most abstracted of which is the data layer, which has direct access to the data. This means that user queries or requests must go through multiple layers incorporating multiple security features before data is accessed. Some of these security features include the following:

- Base pages are implemented that authorize page-level access for each Web request
- All Web requests are encrypted using RSA encryption
- User entered data is checked in each instance for malicious script insertion
- Parameterized stored procedures and input parameter validation are used to protect against SQL injection, cross-site scripting and XPath injection.

Second, *GiftWrap* 4.0 has two levels of data encryption, providing a strong deterrent against unauthorized access to *GiftWrap* data. The entire database is encrypted using Microsoft's Transparent Data Encryption, making *GiftWrap* database files unintelligible to an unauthorized person. In addition, selected fields are encrypted within the *GiftWrap* database, including social security number and date of birth fields. This field-level encryption makes sensitive information unable to be viewed outside the *GiftWrap* application, even by staff with authorized access to the database. The keys used for database encryption are industry standard strength. In the unlikely event than an unauthorized person obtains access to the *GiftWrap* database files, he or she would have to discover and decrypt an encryption key to allow SQL server to communicate with the database. Assuming the successful decryption of this initial encryption key, the intruder would need to decrypt yet another encryption key to view sensitive data fields such as social security number or date of birth. Because the possible key permutations number in the hundreds of millions, the decryption and discovery of these keys is virtually impossible without a high level of expertise and the resources of thousands of supercomputers.

Third, *GiftWrap* supports both an application and a system administration database. The application database contains and manages your data, while the system administration database supports the *GiftWrap* system administration application. This system administration database contains information about *GiftWrap* clients, information that must be verified in order for you to login to the *GiftWrap* application. The application database then verifies and validates your login credentials. By distributing the login process across two databases, we create a virtual firewall between the outside world and your data.

Fourth, the *GiftWrap* database is designed and architected to support a multi-tenant configuration. Multitenancy refers to an architecture in which a single instance of the application runs on a server, serving multiple client organizations (tenants). Based on a multitenant architecture, *GiftWrap* 4.0 is designed to virtually partition its data so that each client organization works only with their data and has no access to the data of any other organization. Data in the *GiftWrap* database is partitioned by client identifier, and within each client, data is partitioned by tenant identifier. The figure below shows the logical separation of *GiftWrap* data.



GW 4.0 Application Data Partition

All user requests for data must include a client identifier, tenant identifier/s and the requesting user identifier to obtain access to data. The system will generate an exception and will block and notify the user if the requesting user does not have access rights.

Fifth, *GiftWrap* 4.0 supports both user and role based access control. *GiftWrap* 4.0 controls access to charity data with user-based control. *GiftWrap* 4.0 controls access to application functionality using role-based control. The resulting two-level access control model allows you to create authorized users whose access to application functionality and to your data is strictly limited by you. Role and user based access allows you the flexibility to create an access control model that conforms to your workflow and operating policies, and ensures data access that is secure and meets your operational requirements.

Sixth, users can only obtain access to the application with a valid clientname and username, and password. Passwords must be a minimum of 8 characters in length, and must include both alpha and numeric characters. Clients have the option requiring additional password complexity, including the prohibition dictionary words. For example the password "Password0118" would be rejected because it contains the word "password". Users are required to change their system generated passwords upon initial login, and in addition, users must change their passwords every

sixty days. By default passwords cannot be reused for 180 days. Passwords must conform to the following criteria:

1. Password must contain at least 2 out of the following 3: Upper case, Lower case, Special characters.
2. Password may not contain 7 or more consecutive numbers.
3. Password may not contain an English word of 6 or more characters if the word is bound on either side by non-alpha characters or null.
4. The application prevents a string of 3 consecutive identical characters in a password.
5. The application prevents users from selecting their userID as a password both forward or in reverse.
6. The application prevents a password that would be equal to the user's first, middle or last name.

Of the above, numbers 2, 3, and 4 are configurable.

Seventh, customers can optionally add on IP address filtering. This functionality allows access from a limited set of known IP addresses. Typically, your IP address is unique to your organization and no one else. This adds another layer of security on top of the standard *GiftWrap* security. For more details please contact PGCalc.

Finally, *GiftWrap* customers have control over access to their data and all user accounts. Once *GiftWrap* service has been provisioned for a customer, PG Calc staff does not have access to customer data. For troubleshooting purposes, customers may choose to give PG Calc permission to access their data, either by provisioning a user account for PG Calc's temporary use, or by allowing PG Calc support staff to access the customer's database directly. However, PG Calc does not have access to customer data without direct permission from the customer.

The combination of these security features, as well as hosting, network and physical security ensure that your data will be secure when hosted on the PG Calc *GiftWrap* platform.

6 WHAT KIND OF CONTINUITY OF OPERATION MEASURES ARE IN PLACE?

The security of your data on an ongoing basis is of paramount importance to PG Calc. As such, we have selected Rackspace, one of the nation's top web hosting providers, to host *GiftWrap* 4.0 systems. Rackspace maintains a sophisticated, high-capacity infrastructure with state of the art monitoring, redundant power, comprehensive physical security, continuous network availability, and unparalleled support. Rackspace has full SSAE-16 SOC Type II certification and works with many major financial institutions.

- The *GiftWrap* data center's HVAC (Heating Ventilation Air Conditioning) system is N+1 redundant. This ensures that a duplicate system immediately comes online should there be an HVAC system failure.
- Every 90 seconds, all the air in the *GiftWrap* data center is circulated and filtered to remove dust and contaminants.

- Advanced fire suppression systems are designed to stop fires from spreading in the unlikely event one should occur.
- Should a total utility power outage ever occur, the *GiftWrap* data center's power systems are designed to run uninterrupted, with every server receiving conditioned UPS (Uninterruptible Power Supply) power.
- The *GiftWrap* data center's UPS power subsystem is N+1 redundant, with instantaneous failover if the primary UPS fails.
- If an extended utility power outage occurs, routinely tested, on-site diesel generators can run indefinitely.
- Fully redundant, enterprise-class routing equipment is used in the *GiftWrap* data center.
- Fiber carriers enter the *GiftWrap* data center at disparate points to guard against service failure.

7 WHAT DISASTER RECOVERY PLANS ARE IN PLACE FOR GIFTWRAP 4.0?

GiftWrap 4.0 and the *GiftWrap* system administration applications and databases are protected against disaster through a well-defined, comprehensive disaster recovery plan.

7.1 DISASTER RECOVERY

The first level of disaster recovery comprises a backup *GiftWrap* server configuration that is geographically distant from our production servers and managed by a different hosting vendor. The back-up servers are configured to mirror the production systems. These systems are maintained in an operational state, are tested and are monitored just as our production servers. The backup application server is updated each time the production application server is updated. The production and backup *GiftWrap* databases are synchronized in real time. That means that all *GiftWrap* production database transactions are automatically captured and transferred to the backup database server in real time, where the backup *GiftWrap* database is brought up to date. As a result, the disaster recovery backup server will always be current with respect to your data. In the event of a disaster, in which the production *GiftWrap* data center is no longer available, the backup *GiftWrap* servers become operational and function as the *GiftWrap* production servers. The failover process takes up to two hours. As part of the failover process, a transfer of the *GiftWrap* application server Internet address from the production to the DR platform takes place. It typically takes about an hour for the new IP address to become associated with and propagated through the Internet DNS system, at which point the DR system will become available. This transition will be seamless to all *GiftWrap* users. You will not need to change anything about the way you access the *GiftWrap* 4.0 application.

7.2 MANAGED BACKUP

The second level of disaster recovery is provided through a managed backup program that comprises weekly full backups and daily incremental backups of all modified files and directories on the *GiftWrap* servers. With this strategy, a full backup of all files and directories is performed one day a week. Each of the remaining six days thereafter, an incremental backup is performed on the same set of files and directories. Backup tapes are kept on site for two weeks and then moved to

an offsite location for another four weeks. In this additional way, your data are protected even in the event of a data center disaster.

8 IS MY DATA SECURE AS IT TRAVELS OVER THE INTERNET?

All *GiftWrap* data is transmitted securely over the Internet, using strong, industry standard Hyper Text Transport Protocol Secure (HTTPS) encryption, based on the Transport Layer Security (TLS) 2.0 protocol. HTTPS encryption is used to secure data transmission in a variety of applications, including online credit card purchases, and is typically identified by the “padlock” icon on your browser.

How does HTTPS encryption work? Imagine sending mail through the postal system in a clear envelope. Anyone with access to your mail can see the information contained in the envelope. If it looks valuable, they might take it or change it. With HTTPS encryption, your data is secured and not able to be viewed by any unauthorized parties while in transport. A TLS Certificate establishes a private communication channel over the Internet enabling encryption of the data during transmission, ensuring that only the authorized server (*GiftWrap*) and client (your browser) have access to the data. Encryption scrambles the data, essentially creating an envelope for message privacy. When your Web browser points to a secured domain, like *GiftWrap.pgcalc.com*, the browser and the server exchange secret keys, enabling the creation of an encrypted tunnel over which data can be transmitted securely. TLS Certificates like those used in the transport of *GiftWrap* data, enable every *GiftWrap* user to experience the strongest HTTPS encryption available.

9 CAN I GET A COPY OF MY DATA?

GiftWrap 4.0 provides you with multiple methods of accessing your data. First, *GiftWrap* provides a data export function in the Utilities menu that allows you to export your charity data. This function allows you to select all or specific database tables for export to individual CSV format files. These files can be viewed in Microsoft Excel and can be uploaded to all leading database management systems. Further details on the structure of *GiftWrap* data tables and their relations are provided in the *GiftWrap* 4.0 Help system.

Second, you may export the data from your charity in a format that is readable specifically by the *GiftWrap* application. This function is available under the Charity Setup screen and can be used to transfer charity data from one *GiftWrap* database to another, or to a new client within a *GiftWrap* database.

Finally, you may export the raw data for any *GiftWrap* report, in both flat and hierarchical format, to a CSV format file. This feature allows you to export report data to any application that can import a CSV file. In addition, you can choose to export *GiftWrap* reports in alternate formats, including:

- Crystal Reports (RPT)
- Adobe Acrobat (PDF)

- Microsoft Word
- Microsoft Excel
- Rich Text Format

10 WHAT IS THE GIFTWRAP 4.0 UPDATE PROCESS?

There are three types of *GiftWrap* 4.0 updates that will be implemented from time to time, as follows:

- Major update - A major release typically includes major new features, including, for example new *GiftWrap* modules.
- Minor update - A minor release typically includes enhancements to existing features, possibly small new features, and bug fixes.
- Maintenance update - A maintenance release generally only includes fixes for defects or issues that have been identified once while in operation.

Release Level	New Functionality	Enhancements	Fixes
Major	YES	YES	YES
Minor	NO	YES	YES
Maintenance	NO	NO	YES

It is anticipated that there will be no more than a total of three update releases in a year, comprising some combination of major and minor update releases.

Major updates will be targeted for a maximum of two releases per year. Major updates will typically involve changes to both application code and database and will require the installation of various files and executables, as well as configuration file modifications.

Minor updates will be targeted for release as necessary. Minor updates will typically involve changes to both application code and database and will require the installation of various files and executables, as well as configuration file modifications.

Maintenance updates will be targeted for release as necessary. Maintenance updates will typically involve changes to either application code or to the database and will require the installation of compiled code files and executables, or database scripts.

11 WHAT IS THE GIFTWRAP 4.0 MAINTENANCE PROCESS?

The *GiftWrap* 4.0 hosted application environment will be maintained on a regular basis. Maintenance tasks will include the following:

- Database maintenance

- Application update (see above)
- Monthly server maintenance

All maintenance activities will be scheduled, whenever possible, during off hours, so as to limit interruption of service to our customers to the greatest extent possible. All maintenance activities will be communicated to customers in advance through the *GiftWrap* application and by email.

12 WHAT KIND OF UPTIME CAN I EXPECT WITH THE *GIFTWRAP* 4.0 HOSTED APPLICATION?

Aside from scheduled maintenance and update activities (see above), it is anticipated that the *GiftWrap* 4.0 application will be available and operational as follows:

- Datacenter network availability: 100%
- Datacenter infrastructure availability: 100%
- All servers, firewalls, and load balancers, and attached storage devices are guaranteed to be operational. Hardware repair or replacement is guaranteed to be complete one hour of problem identification.
- PG Calc’s *GiftWrap* 4.0 application warranty is no less than 99.5% uptime. “Uptime” means the service is operational and is available to communicate with the Internet in PG Calc’s server location. The uptime level will be measured by the total uptime over the previous year divided by the total number of hours in that year.

13 WHAT HOSTING OPTIONS ARE AVAILABLE?

Giftwrap 4.0 is available in the following hosting implementation configurations:

Option	Description
<i>GiftWrap</i> Standard	The <i>GiftWrap</i> application and all <i>GiftWrap</i> data are hosted on dedicated application and database servers. Customers share access to the <i>GiftWrap</i> application server, and customer data is maintained in a shared database within the <i>GiftWrap</i> hosted database instance. This configuration allows for the logical partitioning of customer data based on client/tenant ID within the shared <i>GiftWrap</i> database. Access to the application and customer data is secured via logical partitioning and multiple levels of access verification.

Option	Description
<i>GiftWrap</i> Silver	The <i>GiftWrap</i> application and all <i>GiftWrap</i> data are hosted on dedicated application and database servers. Customers share access to the <i>GiftWrap</i> application server. Customer data is maintained in a separate database within the <i>GiftWrap</i> hosted database server. This configuration allows for the partitioning of customer data into a database that is logically and physically separate from the shared <i>GiftWrap</i> database. This customer database will share a physical server with the <i>GiftWrap</i> shared database.
<i>GiftWrap</i> Gold	The <i>GiftWrap</i> application and all <i>GiftWrap</i> data are hosted on dedicated application and database servers. Customers share access to the <i>GiftWrap</i> application server. Customer data is maintained on a separate virtual database server, with a dedicated database instance and database. This configuration allows for the partitioning of customer data into an operating system environment that is virtually separate from the shared <i>GiftWrap</i> operating environment. This customer database and database instance will be installed on a virtual server separate from the shared <i>GiftWrap</i> database.
<i>GiftWrap</i> Platinum	The <i>GiftWrap</i> application and data are hosted on dedicated servers. The <i>GiftWrap</i> application is maintained on a dedicated virtual application server, and as such, customers have access to a dedicated instance of the <i>GiftWrap</i> application. Customer data is maintained on a dedicated virtual database server, with a dedicated database instance and database. This configuration allows for the partitioning of the <i>GiftWrap</i> application and customer data into an operating environment that is virtually separate from the shared <i>GiftWrap</i> application and customer data operating environment. This <i>GiftWrap</i> application and customer database and database instance will be installed on dedicated virtual servers separate from the shared <i>GiftWrap</i> application and database. Note that your Platinum system can be accessible either via the Internet, or Virtual Private Network.
Enterprise	<i>GiftWrap</i> 4.0 application and system administration are installed on the customer's network, behind the customer's firewall. The customer is the first line of support and is responsible for providing and maintaining servers, network, security and hosting infrastructure.

14 HOSTING OPTION MATRIX

Service Option	Server Hardware	Application Server	Database Server
Standard	Dedicated	Shared	Shared
Silver	Dedicated	Shared	Shared – separate database within shared database instance
Gold	Dedicated	Shared	Dedicated virtual database server
Platinum	Dedicated	Dedicated virtual application server	Dedicated virtual database server
Enterprise	Customer Provided	Customer Provided	Customer Provided