



Contrail[®] Server Pre-Launch Planning

Software Version 8.0.X

CORPORATE HEADQUARTERS

OneRain Incorporated
1531 Skyway Drive, Unit D
Longmont, CO 80504-6270

Revision: 3.0



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Introduction

This document provides guidelines to ensure that the build, setup and your implementation of OneRain's **Contrail® Server** managed hosted service proceeds smoothly. It provides an overview of requirements and some additional information to prepare for the launch of your website.

This document is intended to provide a generic guideline as each organization has many variables, including the number of users, size of system, etc.

About Contrail Server

OneRain's easy-to-use data and graphical visualization software tools provide historical and real-time sensor monitoring data with alarm and notification capability accessible from any web-enabled device. Contrail Server is the hosted server resource edition of OneRain's Contrail enterprise-level software solution. You operate Contrail and manage your data virtually as though it were on your server, with the complete functionality of Contrail Base Station licensed edition. Contrail Server operates Contrail software exclusively and resides in a secure industrial data center. OneRain manages and administers server OS updates, and performs all Contrail software application updates and new releases. Contrail Server is a managed application service operated by OneRain and provided on a fixed annual subscription fee basis.

Customer Pre-Launch Checklist

There are certain steps that you must take before the launch of your Contrail Server can take place. We recommend that you read this document in its entirety in order to fully understand the pre-launch requirements. A checklist on page 8 of this document will assist you in coordinating and planning the build, setup and launch tasks.

Planning your Contrail Server launch

The three key areas of consideration to smooth the process of installation are:

- Time
- Pre-launch Plan
- Services/Training

Time

Following receipt of a purchase order/contract, please allow one to two weeks prior to implementing your Contrail Server to allow for pre-launch planning, build and setup.

Pre-Launch Plan

Involve and get a commitment from all appropriate personnel for your launch plan; create a cross-functional installation team (administrators, end users, management, etc.) with a designated lead. The following should be considered as part of your pre-launch plan.

✓ Understand Contrail Server requirements

- You will need ports open for services including data routing.
- Set up a domain name registered to WAN address for Contrail and Contrail Inventory.
- Consider groups and users access and privilege levels.

Planning a two-server architecture (local Contrail Base Station with hosted Contrail Server)?

- Consider network connectivity, firewall access, etc. Identify which will be the primary server and which will be the secondary.
- Determine failover process.
- All load-balancing and packet inspection network devices should be configured to allow necessary network traffic to OneRain hosted services.

✓ Understand Contrail Setup Requirements

- **Theming Contrail's user environment** to match your organization's look and feel. Choose an existing web site as the template for the theme, or collect logo images, color swatches to be used.
- **Maps.** Calculate the extents of your map regions in decimal degrees. Contrail can host multiple map regions, offering regional and zoomed in views.
- **Site and Sensor Definitions** (see <http://contrail.onerain.com/help/Import.xls> to download template for minimum requirements for site and sensor creation).
- **Identify site groupings** such as watersheds, water basins, fire borders, or other logical groups or views.
- **Site and Sensor Meta Data.** Collect additional information to enhance the Site and Sensor metadata. Site images, maintenance or public notes about the installations, sensor thresholds, and compile historic events such as maximum values during storms.

- **Criteria for Sensor Types.** Determine default validation criteria for Sensor Types. The default validation will be used as the baseline for new sensors.
- **Alarms and Notifications.** Consider types of notifications and alarm evaluations to be used in real-time monitoring.
- **Users and Privileges.** Consider groups and users access and privilege levels.
- **Domain Name?** The “user” environment is a read-only view of the system that allows you to access Web Content, Maps, Site and Sensor status and data. You may have access control through a login/password screen, or via a Public web site (no password). If you have chosen the Public web site option, OneRain will provide a hosted sub-domain (e.g., myagency.onerain.com). If you would like your Contrail Public web site to appear under your organization’s own domain URL, you will need to set up a network URL address that is mapped to the OneRain hosted sub-domain.

Local Hardware

- **IP/Serial Port(s):** Digi PortServer® TS devices (minimum 2- or 4- port recommended).*
- Custom cables or adapters necessary to split existing serial data feed.*
- All load-balancing and packet inspection network devices should be configured to allow necessary network traffic to OneRain hosted services.

*NOTE

A **Custom Serial-to-IP Connection Kit** is available to purchase from OneRain. The device will be pre-programmed and pre-configured by OneRain for your specific site requirements for ease of installation and setup.

Contrail Server Training

Contrail is a dynamic product with many features. Our on-site training ensures you gain the maximum value from your OneRain software and products and enables you to confidently utilize the product in its entirety. OneRain provides in-depth end-user, system administrator and server administrator training with your own system and data. Training includes:

- ✓ **Contrail Administrator Interface:** Setting up users and authorizing privilege levels, establishing sites and sensors, creating validation formulas, setting thresholds and creating alarm rules and notifications, acknowledging and clearing alarms, accessing alarm logs, accessing standard maintenance reports, modifying themes, adding content and links.
- ✓ **Contrail User Training:** Detailed user interface, viewing data with map view and site lists; drilling down to sensor data. Use of single and multiple graphs. Retrieving historical data and exporting data. Overview of detailed help system.

Supported Web Browsers

Contrail works well on the latest versions of all popular web browsers and mobile device platforms.

Government Policy on Hypertext Transfer Protocol Secure – HTTPS-Only Standard

IMPORTANT NOTE

On June 8, 2015, the Whitehouse mandated HTTPS connection for Federal publicly-accessible websites¹. The directive instructs Federal agencies with publicly accessible websites to provide service only through a secure HTTPS connection that encrypts nearly all information during communication between the website and user.

(Reference M-15-13 Memorandum for the Heads of Executive Department and Agencies “*Policy to Require Secure Connections across Federal Websites and Web Services*”)

The strongest privacy and integrity protection currently available for public web connections is Hypertext Transfer Protocol Secure (HTTPS). HTTPS is a combination of HTTP and Transport Layer Security (TLS). TLS is a network protocol that establishes an encrypted connection to an authenticated peer over an untrusted network.

TLS/SSL is the de facto standard for encrypted and authenticated communications between clients and servers on the Internet.

- ✓ Transport Layer Security (TLS) is the successor of Secure Sockets Layer (SSL); they are both cryptographic protocols that provide secure communications on the Internet for such things as web browsing, e-mail, Internet faxing, instant messaging, and other data transfers. There are slight differences between SSL and TLS, but the protocol remains substantially the same.
- ✓ A TLS/SSL certificate is required to enable encryption and authentication on your site domain and use the HTTPS protocol.
- ✓ Data between the browser and **Conrail** is encrypted. This is important for transmitting sensitive data like username and password.

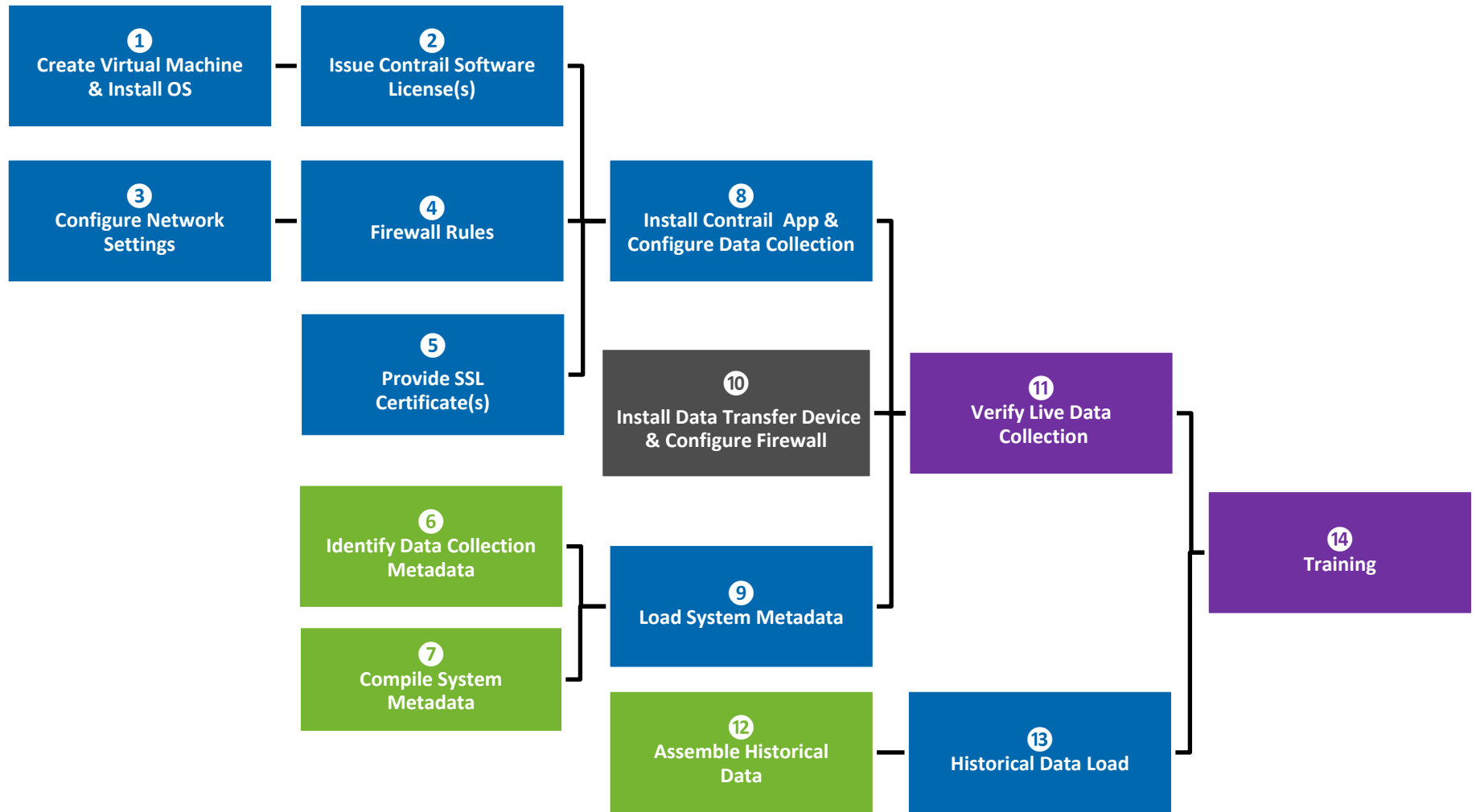
Please visit <https://HTTPS.cio.gov> for technical assistance and best practices to aid in the implementation of this policy.

Security and Encryption for OneRain Hosted Services

All services hosted by OneRain use secure communication via HTTPS. Any requests made via HTTP are re-routed to HTTPS. All servers hosted with OneRain and using a *.onerain.com domain name are also provided an SSL certificate.

¹ Publicly-accessible websites and services are defined here as online resources and services available over HTTP or HTTPS over the public Internet that are maintained in whole or in part by the Federal Government and operated by an agency, contractor, or other organization on behalf of the agency. They present government information or provide services to the public or a specific user group and support the performance of an agency's mission. This definition includes all web interactions, whether a visitor is logged-in or anonymous.

Software Implementation Process for Contrail® Server



Steps	Tasks	OneRain	Client IT	Client System Admin.	All
1	Create Virtual Machine(s) & Install OS <ul style="list-style-type: none"> 64-bit virtual machine: refer to Contrail Pre-Installation Plan for server hardware requirements. Operating System: CentOS 8; Minimal 	✓			
2	Issue Contrail Base Station software license authorization key(s)	✓			
3	Configure Network Settings <ul style="list-style-type: none"> Configure necessary network settings (Local IP address, DNS, etc.). Determine WAN address and register public URL if applicable. 	✓			
4	Firewall Rules <ul style="list-style-type: none"> Ensure all firewall rules regarding required Contrail Incoming and Outgoing Network Ports are in place. 	✓			
5	Provide SSL certificate(s) <ul style="list-style-type: none"> Data between the browser and Contrail is encrypted. 	✓			
6	Identify Data Collection Metadata <ul style="list-style-type: none"> Identify application user access privilege levels. Identify site groupings: watersheds, water basins, fire borders, or other logical groups or views. Identify site images, maintenance or public notes, sensor thresholds, historic events such a maximum values during storms, etc. Determine default validation criteria for sensor types. Alarms and Notifications: Consider alarm evaluations and types of notifications. 			✓	
7	Compile System Meta Data <ul style="list-style-type: none"> Provide Data Collection System information. Provide Site and Sensor Meta-data definitions via Import Spreadsheet. 			✓	
8	Install Contrail Application & Configure Data Collection <ul style="list-style-type: none"> Install Contrail application Perform advanced configuration of data collectors, data agents and other services. 	✓			
9	Load System Meta Data <ul style="list-style-type: none"> As Identified in step 7. 	✓			
10	Install Data Transfer Device & Configure Firewall <ul style="list-style-type: none"> Install Serial to IP device or equivalent, which will provide a link for data between the Client data collection platform and Contrail Ensure firewall is configured to allow for communication 		✓		
11	Verify Live Data Collection <ul style="list-style-type: none"> Confirm that data are being collected and correctly processed as expected. 				✓
12	Assemble Historical Data <ul style="list-style-type: none"> Catalog and validate existing datasets to migrate to Contrail. 			✓	
13	Historical Data Load (if applicable) <ul style="list-style-type: none"> Optional professional services performed by OneRain for historical data transfer. 	✓			
14	Training <ul style="list-style-type: none"> Advanced Server Administrator. Contrail Application System Administration. Contrail General User. 				✓

Customer Pre-Launch Checklist for Contrail® Server

There are certain steps that **you must take** before the launching of your Contrail Server can take place. The checklist below will assist you in coordinating and planning the installation tasks in preparation for a smooth and efficient installation of Contrail Server. **Send a copy of the completed form to OneRain** via email at customer.support@onerain.com (or fax 303-774-2037). Keep a copy for your records. To fill out the form electronically and then save and submit, you'll need [free Adobe® Reader®](#).

CONTACTS AND INSTALLATION ACCOUNT DETAILS <i>(to be completed by customer)</i>		
ORGANIZATION / BUSINESS NAME	DEPARTMENT / DIVISION	
STREET ADDRESS	CITY, STATE, ZIP	
PRIMARY CONTACT		
PRIMARY CONTACT NAME	PRIMARY CONTACT PHONE	PRIMARY CONTACT EMAIL
I.T. AND NETWORK ADMINISTRATION CONTACT		
I.T. CONTACT NAME	I.T. CONTACT PHONE	I.T. CONTACT EMAIL
OTHER CONTACT		
CONTACT NAME	CONTACT PHONE	CONTACT EMAIL

Task	Description	Check ✓		Notes
		Done	N/A	
Hardware				
1.	If applicable, order IP/Serial Device: OneRain Custom Serial-to-IP Connection Kit, or other.	<input type="checkbox"/>	<input type="checkbox"/>	
2.	Identify network drops for Contrail Base Station server(s), if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Identify network drop of IP/Serial Port devices. OneRain will provide IP addresses.	<input type="checkbox"/>	<input type="checkbox"/>	
Domain Names				
4.	Work with OneRain to determine how web address is set up.	<input type="checkbox"/>	<input type="checkbox"/>	
Software Application Data				
5.	Web theme: Collect logo, images, color swatches, etc., to be used to customize the website.	<input type="checkbox"/>	<input type="checkbox"/>	
6.	Maps. Calculate the extents of your map regions in decimal degrees. Contrail can host multiple map regions offering regional and zoomed-in views.	<input type="checkbox"/>	<input type="checkbox"/>	
7.	Site and Sensor Definitions. Download and complete template for minimum requirements for site and sensor creation. http://contrail.onerain.com/help/Import.xls	<input type="checkbox"/>	<input type="checkbox"/>	

8.	Identify site groupings: watersheds, water basins, fire borders, or other logical groups or views.	<input type="checkbox"/>	<input type="checkbox"/>	
9.	Compile site and sensor metadata. Site images, maintenance or public notes, sensor thresholds, historic events such a maximum values during storms, etc.	<input type="checkbox"/>	<input type="checkbox"/>	
10.	Determine default validation criteria for sensor types.	<input type="checkbox"/>	<input type="checkbox"/>	
11.	Historical data transfer: Catalog and validate existing datasets.	<input type="checkbox"/>	<input type="checkbox"/>	
12.	Alarms and Notifications: Consider alarm evaluations and types of notifications. Who and what groups should receive what types of notifications.	<input type="checkbox"/>	<input type="checkbox"/>	
13.	Conrail Inventory data. Download template for compiling inventory data. http://inventory.onerain.net/help/import.xls	<input type="checkbox"/>	<input type="checkbox"/>	
Other Considerations				
14.	Training: Identify who should be present for Administrator level training. Identify who should be present for User only training.	<input type="checkbox"/>	<input type="checkbox"/>	

Technical Assistance and Support

Questions?

Receive guidance about supported hardware options and network configurations that can assist you with your decisions. OneRain technical assistance is available to warranty or maintenance contract customers who need technical assistance with a OneRain product.

Contact

OneRain Incorporated
1531 Skyway Drive, Unit D
Longmont, Colorado 80504

Technical Support

Email: contrail.support@onerain.com

Phone

+1 303-774-2033

Toll Free

1-800-758-RAIN (7246)

More Information

Since 1992 OneRain has been providing high quality data and professional services to customers who need accurate rainfall and related environmental information to make high-value decisions. Our customers' critical missions include dam safety, flood warning, stormwater and wastewater management, and reservoir and hydropower operations.

Our vertical involvement in water measurement, from gauges through remote sensing and storm analysis, enables us to collect and distribute the best real-time and historical hydro-meteorological data available. Our complete systems approach to hydrological management includes nationwide 24/7-supported enterprise data collection, archiving, notification and Web visualization services, local data collection software, gauge-adjusted radar rainfall estimation, rain and other hydromet gauging and professional services, gauge maintenance, real-time satellite telemetry services, telemetry system integration, storm properties analyses and consulting services.

OneRain has designed, built, rehabilitated, and maintains many hundreds of gauges throughout the country. Each gauge or system is tailored specifically to the customers' needs. OneRain continually strives to be the industry leader to the remote hydro-meteorological world, consistently pushing the bar with new technology, while always maintaining quality service and support.

For the latest information about our products and services, please contact:

OneRain Incorporated
1531 Skyway Drive, Unit D
Longmont, Colorado 80504
T: (303) 774.2033 or Toll Free: 1.800.758.RAIN (7246)
www.onerain.com

